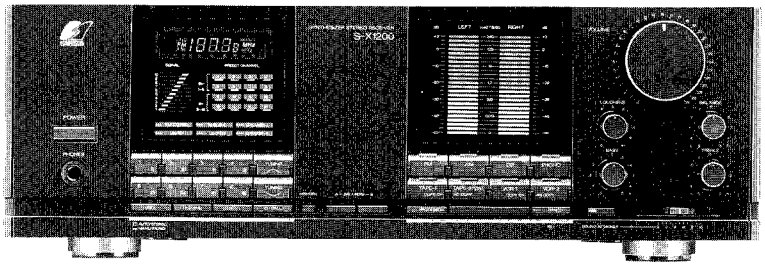
SANSUI

SERVICE MANUAL

S-X1200
S-X900

SYNTHESIZER STEREO RECEIVER



CAUTION

1. Parts identified by the ⚠ symbol on the schematic diagram and the parts list are critical for safety.
   Use only replacement parts that have critical characteristics recommended by the manufacturer.
2. Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

•SPECIFICATIONS

<S-X1200>

Audio section

Power output
Min. RMS, both channels driven, from 20 to 20,000 Hz with no more than 0.018% total harmonic distortion
120 watts per channel into 8 ohms
Total harmonic distortion less than 0.018% at or below rated min. RMS power output
Load impecance ..... 4 ~ 16 ohms
Input sensitivity and impedance (1 kHz)
PHONO ..... 2.5 mV/47 kohms
CD, TAPE PLAY ..... 150 mV/47 kohms
Frequency response (at 1 watt)
..... 10 to 70,000 Hz, +1 dB, −3 dB
Signal to noise ration (short-circuit, A-network)
PHONO ..... 73 dB
CD, TAPE PLAY ..... 95 dB

Controls
BASS ..... ±8 dB at 50 Hz
TREBLE ..... ±8 dB at 10 kHz
LOUDNESS ..... +8 dB at 50 Hz
(VOLUME: −30 dB position) +6 dB at 10 kHz

FM section

Tuning range ..... 88 to 108 MHz
Usable sensitivity
Mono IHF ..... 10.8 dBf (1.9 μV: T-100)
50 dB quieting sensitivity
Stereo ..... 37 dBf
Signal to noise ratio (at 65 dBf)
Stereo ..... 70 dB
Distortion (at 65 dBf)
Stereo ..... less than 0.2% at 1,000 Hz
Stereo separation ..... 40 dB at 1,000 Hz

AM section

Tuning range ..... 530 to 1,600 kHz
Usable sensitivity (Loop antenna)
..... 52 dB/m (398 μV/m)
Signal to noise ratio ..... 45 dB

Others

Power requirements ..... 120/220/240V 50/60 Hz
For U.S.A. and Canada
..... 120V (60 Hz)
Power consumption ..... 420 watts 530 VA Rated
Dimensions ..... 448 mm (17-11/16") W
156 mm (6-3/16") H
428 mm (16-7/8") D
Weight ..... 14 kg (30.9 lbs) net
16.3 kg (35.9 lbs) packed

* Design and specifications subject to changes without notice for improvements.
* Due to local laws and regulations, this unit sold in some areas are not equipped with variable voltage selectors

to be continued ►

•SPECIFICATIONS

<S-X900>

Audio section

Power output
Min. RMS, both channels driven, from 20 to 20,000 Hz with no more than 0.025% total harmonic distortion
80 watts per channel into 8 ohms
Total harmonic distortion less than 0.025% at or below rated min. RMS power output
Load impedance ..... 4 ~ 16 ohms
Input sensitivity and impedance (1 kHz)
PHONO ..... 2.5 mV/47 kohms
CD, TAPE PLAY ..... 150 mV/47 kohms
Frequency response (at 1 watt)
..... 10 to 70,000 Hz, +1 dB, —3 dB
Signal to noise ratio (short-circuit, A-network)
PHONO ..... 73 dB
CD, TAPE PLAY ..... 95 dB
Controls
BASS ..... ±8 dB at 50 Hz
TREBLE ..... ±8 dB at 10 kHz
LOUDNESS ..... +8 dB at 50 Hz
..... +6 dB at 10 kHz
(VOLUME: —30 dB position)

FM section

Tuning range ..... 88 to 108 MHz
Usable sensitivity
Mono IHF ..... 10.8 dBf (1.9 μV: T-100)
50 dB quieting sensitivity
Stereo ..... 37 dBf
Signal to noise ratio (at 65 dBf)
Stereo ..... 70 dB
Distortion (at 65 dBf)
Stereo ..... less than 0.2% at 1,000 Hz
Stereo separation ..... 40 dB at 1,000 Hz

AM section

Tuning range ..... 530 to 1,600 kHz
Usable sensitivity (Loop antenna)
..... 52 dB/m (398 μV/m)
Signal to noise ratio ..... 45 dB

Others

Power requirements ..... 120/220/240V 50/60 Hz
For U.S.A. and Canada
..... 120V (60 Hz)
Power consumption ..... 310 watts 370 VA Rated
440 watts Maximum
Dimensions ..... 448 mm (17-11/16″) W
156 mm (6-3/16″) H
428 mm (16-7/8″) D
Weight ..... 13 kg (28.7 lbs) net
15.3 kg (33.7 lbs) packed

* Design and specifications subject to changes without notice for improvements.
* Due to local laws and regulations, this unit sold in some areas is not equipped with variable voltage selector.

NOTE

1. The symbols, UL, CSA, EU, SS, XX <EXPORT> on the parts list and the schematic diagram mean followings respectively.

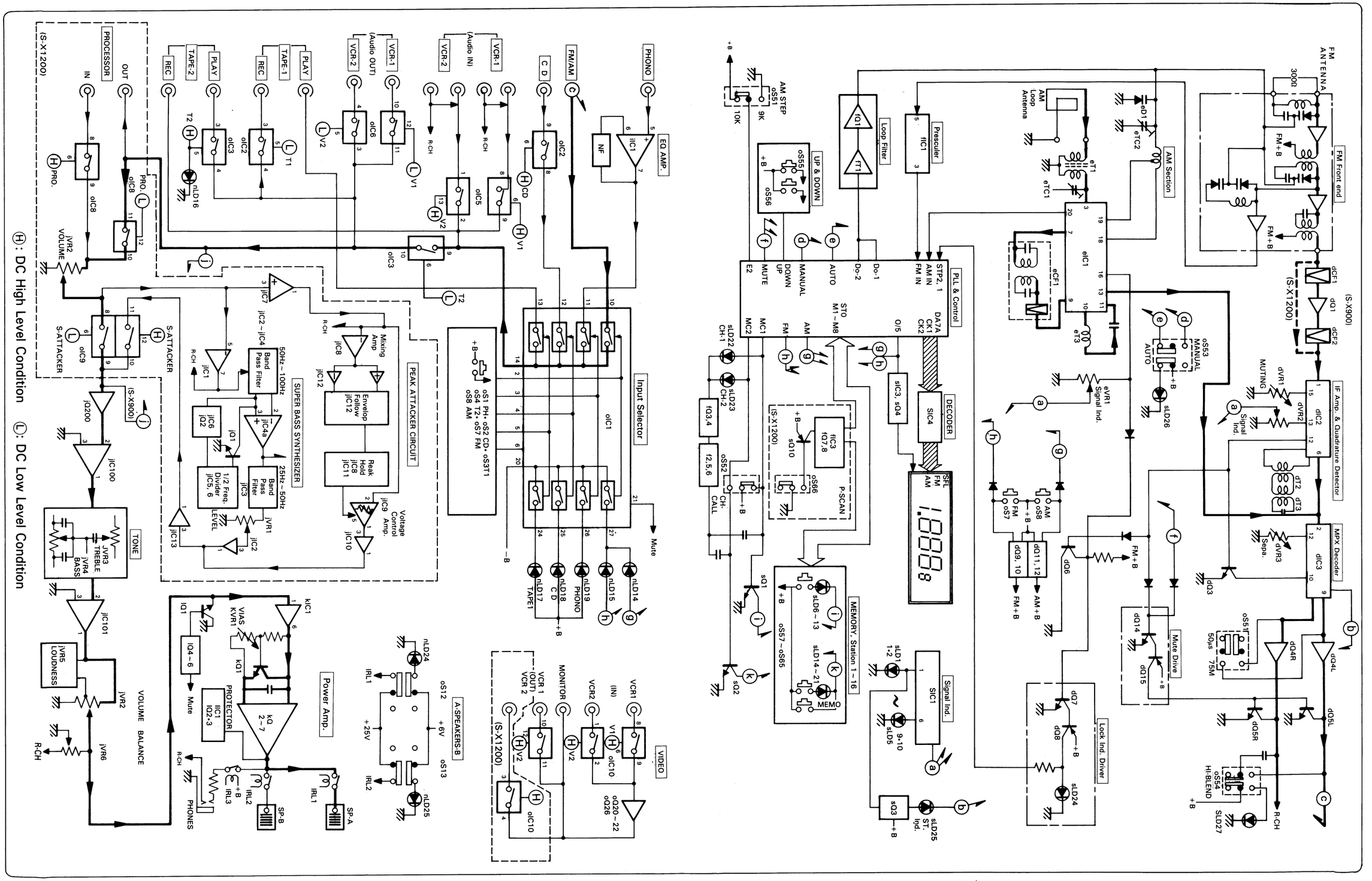
   UL ..... Manufactured for U.S.A market. (Underwriters Laboratories approved model.)
   CSA ..... Manufactured for Canadian market.
   EU ..... Manufactured for European market.
   SS ..... Manufactured for Saudi Arabia market.
   XX <EXPORT> ..... Standard Version.
   NON MARK ..... Common Parts.

2. Some printed circuit boards are not supplied assembled. To separate these in this service manual, the stock numbers are not indicated for these boards. However, stock numbers for individual parts are indicated.
3. Since some capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors and resistors, which was issued on June 1987.
4. Abbreviations in this service manual are as follows.

•Abbreviations List

C.R.	: Carbon Resistor	E.B.L.	: Low Leak Bi-Polar Electrolytic Capacitor
S.R.	: Solid Resistor	Ta.C.	: Tantalum Capacitor
Ce.R.	: Cement Resistor	F.C.	: Film Capacitor
M.R.	: Metal Film Resistor	M.P.	: Metalized Paper Capacitor
F.R.	: Fusing Resistor	P.C.	: Polystyrene Capacitor
N.I.R.	: Non-Inflammable Resistor	G.C.	: Gimmic Capacitor
A.R.	: Array Resistor	A.C.	: Array Capacitor
C.C.	: Ceramic Capacitor	V.R.	: Variable Resistor
C.T.	: Ceramic Capacitor, Temperature Compensation	S.V.R.	: Semi Variable Resistor
E.C.	: Electrolytic Capacitor	SW.	: Switch
E.L.	: Low Leak Electrolytic Capacitor	Chip R.	: Chip Resistor
E.B.	: Bi-Polar Electrolytic Capacitor	Chip C.	: Chip Capacitor

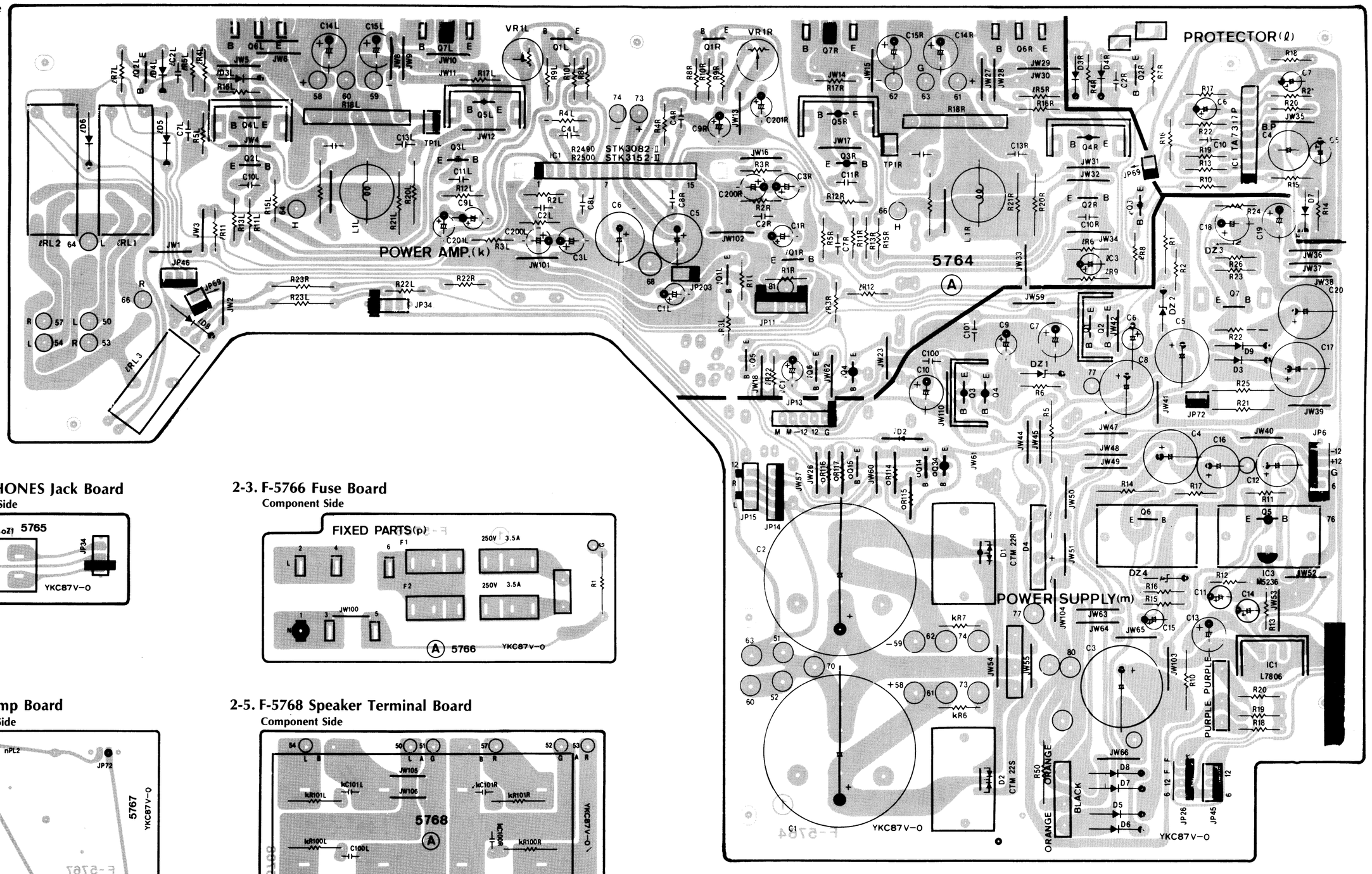
1. BLOCK DIAGRAM



2. PARTS LOCATION ON BOARD

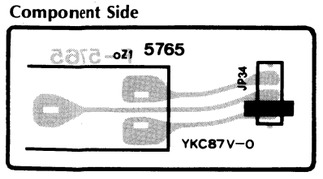
2-1. F-5764 Power Amp. & Power Supply Board

Component Side



2-2. F-5765 PHONES Jack Board

Component Side

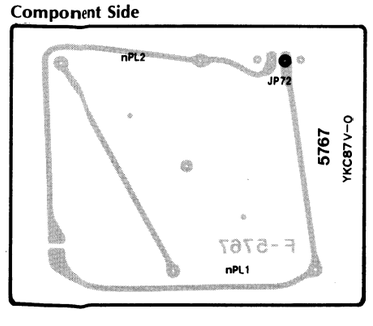


2-3. F-5766 Fuse Board

Component Side

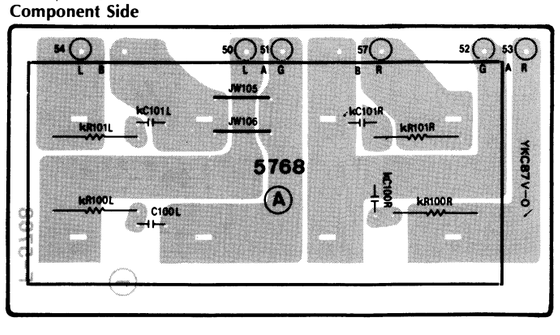
2-4. F-5767 Lamp Board

Component Side



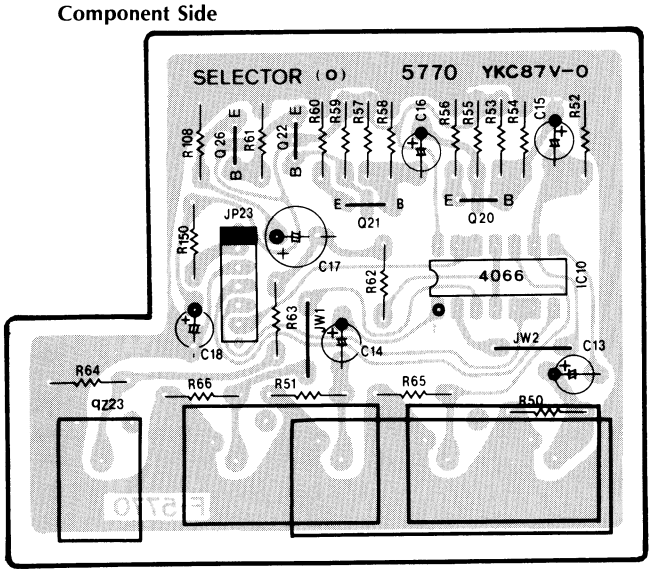
2-5. F-5768 Speaker Terminal Board

Component Side



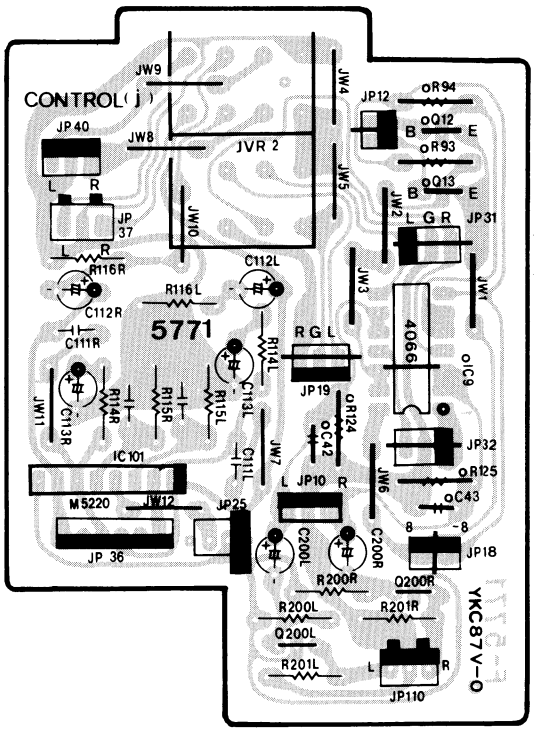
2-6. F-5770 Video Signal Selecter Board

Component Side



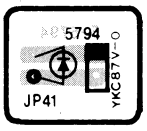
2-7. F-5771 VOLUME Board

Component Side



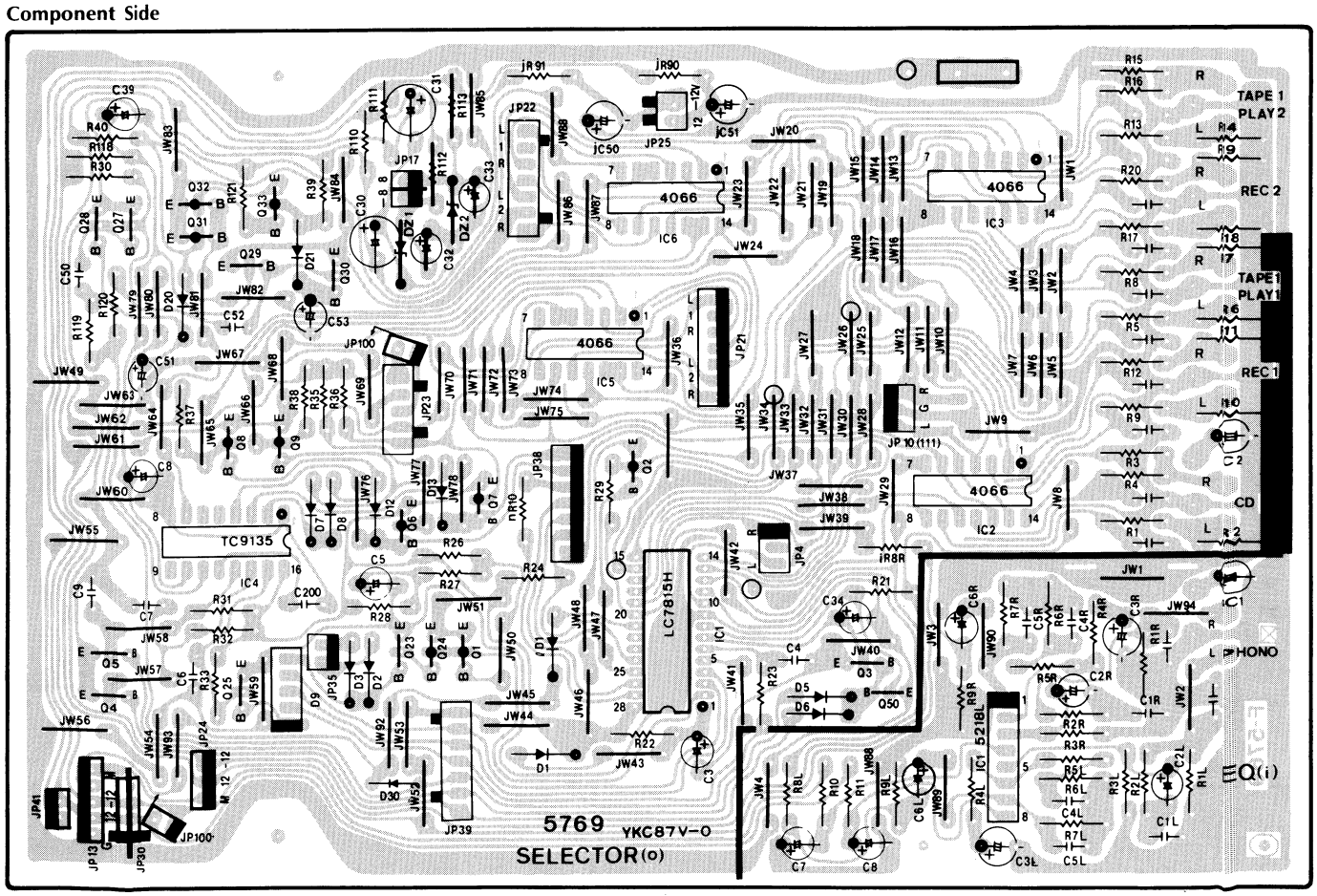
2-8. F-5794 VOLUME Indicator Board

Component Side



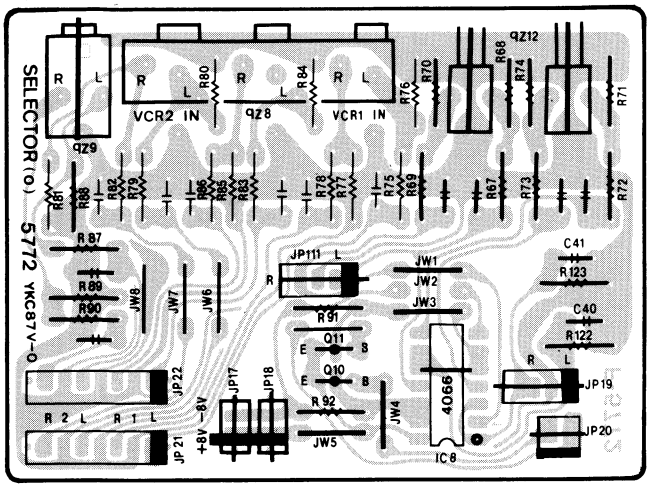
2-9. F-5769 EQ Amp. & Input Selecter Board

Component Side



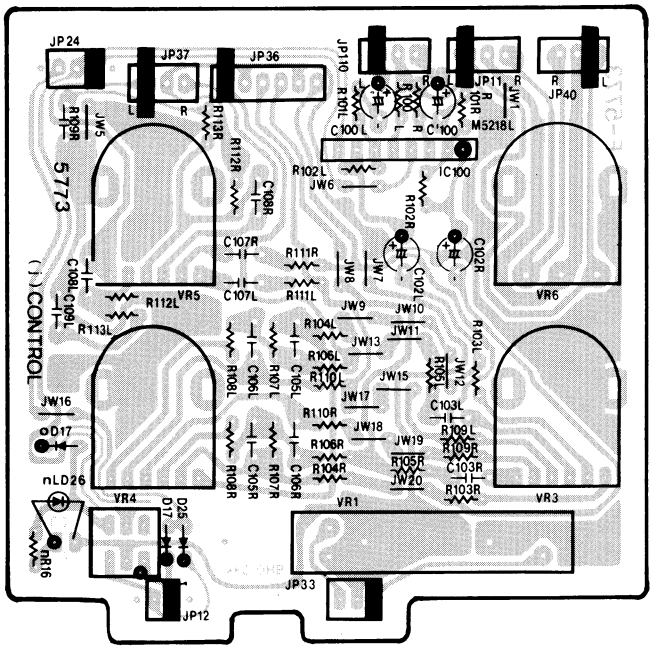
2-10. F-5772 VCR Terminal Board

Component Side



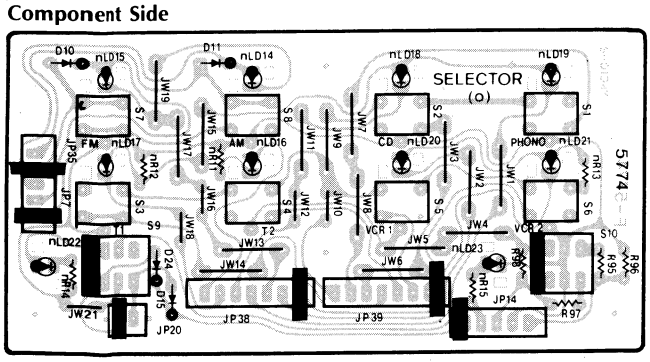
2-11. F-5773 Tone Control Board

Component Side



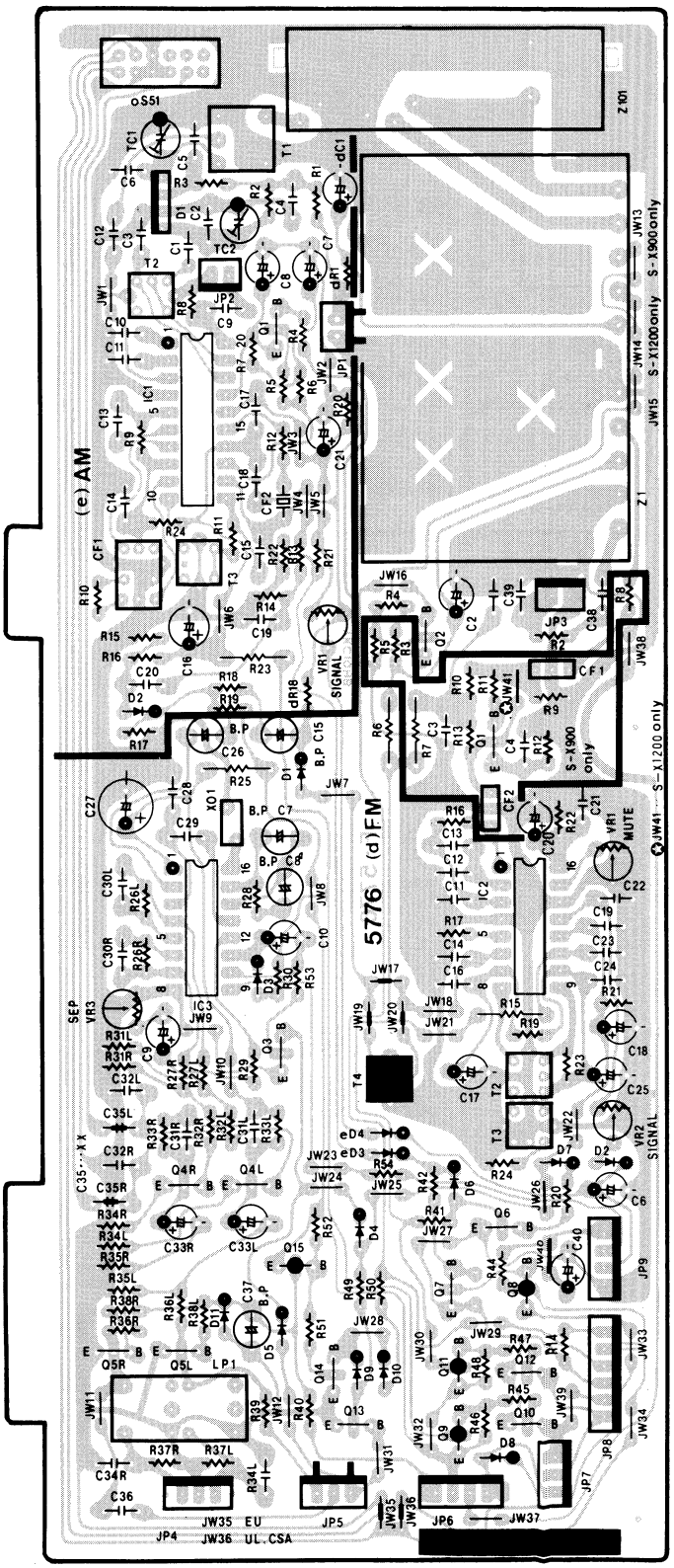
2-12. F-5774 Input Selecter SW. Board

Component Side



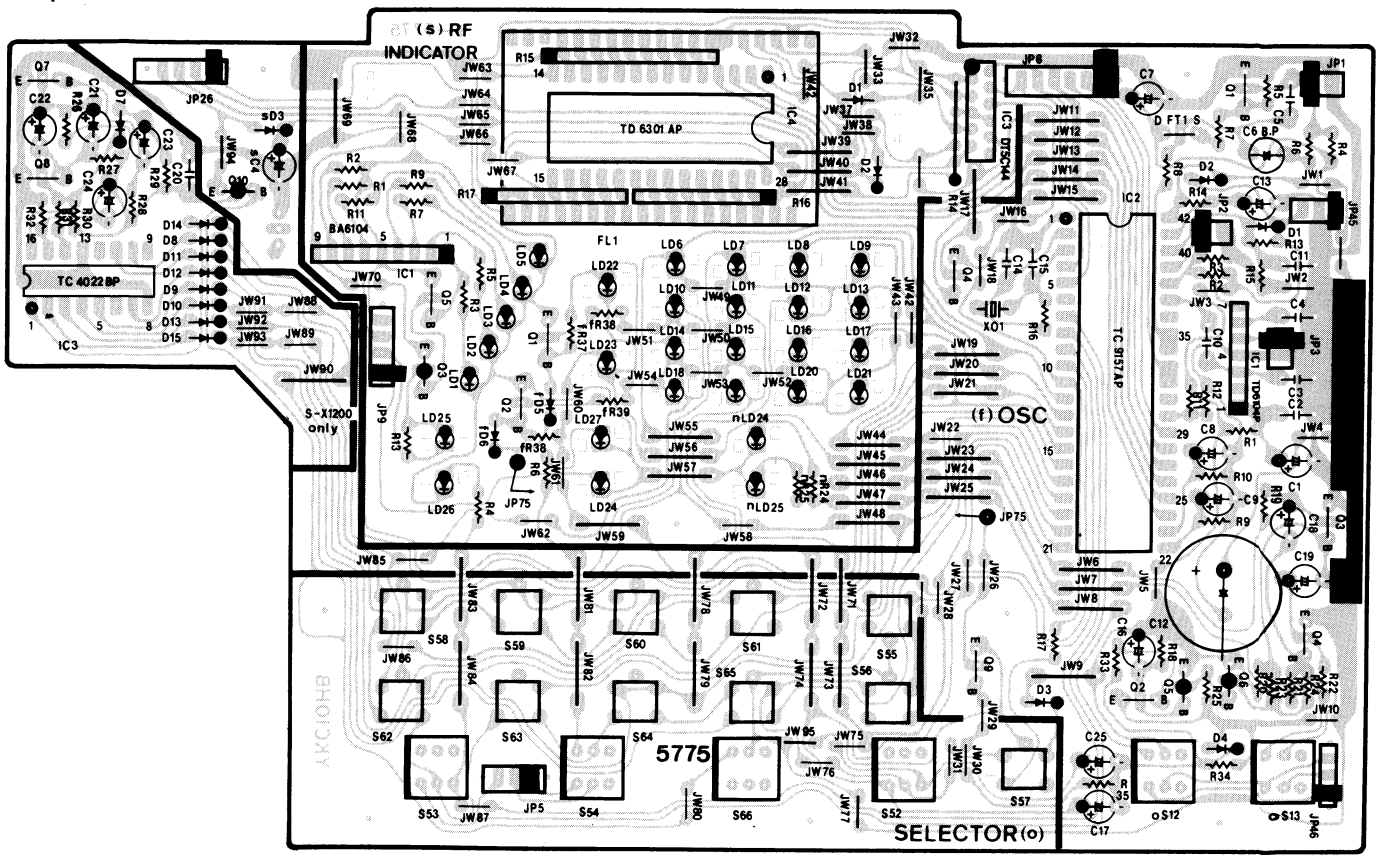
2-13. F-5776 Tuner Board

Component Side



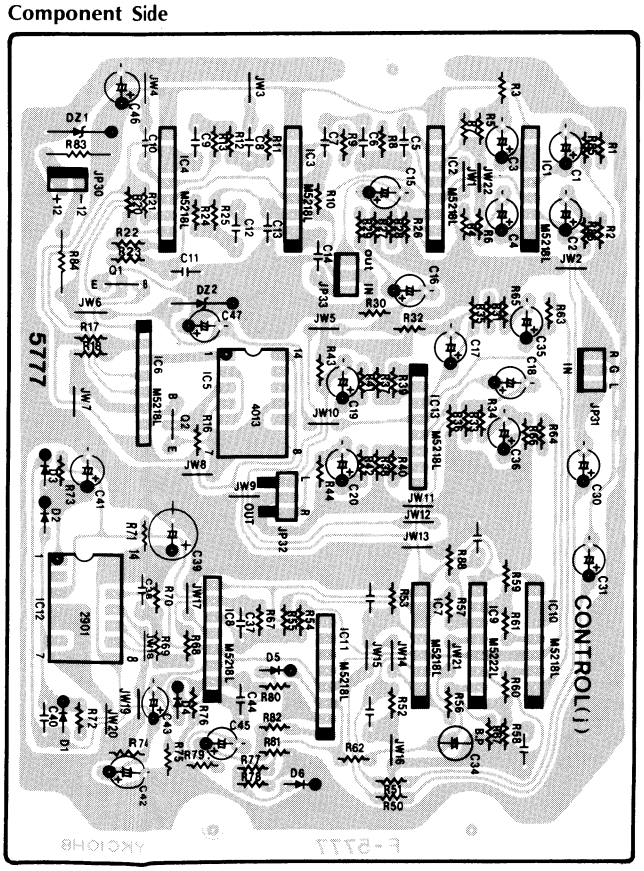
2-14. F-5775 Tuning Control Board

Component Side



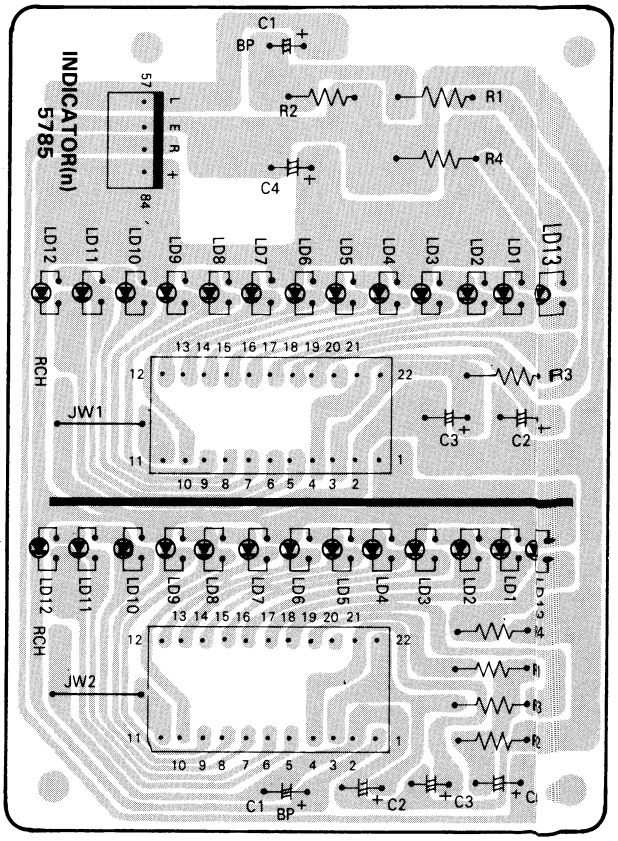
2-15. F-5777 Sound Attacker Board

Component Side



2-16. Level Meter Ass'y

Component Side



3. ELECTRIC PARTS LIST OF BOARD

3-1. F-5764 Power Amp. & Power Supply Board <Stock No. 01054501 = S-X1200/Stock No. 01052801 = S-X900>

Parts No.	Stock No.	Description
•Transistor		
kQ1	46581701	2SC1845
kQ2	46728301	2SC2705
kQ3	46728201	2SA1145
kQ4	46728901	2SC3298
	or 48170001	2SC2592
kQ5	46728801	2SA1306
	or 48169901	2SA1112
kQ6	48793701	2SC3858 (S-X1200)
	48490801	2SC3855 (S-X900)
kQ7	48793601	2SA1494 (S-X1200)
	48490701	2SA1491 (S-X900)
•IC		
kIC1	48127000	STK3152-3 (S-X1200)
	48904300	STK3082-2A (S-X900)
kR18	46637800	0.33ΩX2 7W W.R.
kR20	46623100	10Ω 2W N.I.R.
kR21	46622700	4.7Ω 2W N.I.R.
kR23	46624700	220Ω 2W N.I.R.
kL1	42903700	Peaking Coil
kVR1	46633700	1kΩ (B) S.V.R., Bias
•Transistor		
lQ1	46540801	2SC2878
lQ2	46127901	2SC2910
lQ3	46367001	2SA1115
	or 46367201	2SA1048
lQ4	46719800	DTA124ES
lQ5	46719900	DTC124ES
lQ6	46719900	DTC124ES
•IC		
lIC1	46207600	TA7317P
•Diode		
lD2	03117600	1S2473T77 (S-X1200)
	or 46086000	1S1588TP-3 (S-X1200)
lD3	03117600	1S2473T77
	or 46086000	1S1588TP-3
lD4	03117600	1S2473T77
	or 46086000	1S1588TP-3
lD5	03117700	10E-2
lD6	03117700	10E-2
lD7	03117600	1S2473T77
	or 46086000	1S1588TP-3
lD8	03117700	10E-2
lC4	48104200	220μF 6.3V E.B.
lRL1	48183100	Relay, Protector
lRL2	48183100	Relay, Protector
lRL3	11504301	Relay, PHONES Mute
•Transistor		
mQ1	03083901	2SD313HP (S-X1200)
	03086101	2SD357 (S-X900)
mQ2	46367101	2SC2603
mQ3	48063301	2SB507 (S-X1200)
	03034401	2SB527 (S-X900)
mQ4	46367001	2SA1115
mQ5	48063301	2SB507
mQ6	03083901	2SD313HP
mQ7	03083901	2SD313HP
•IC		
mIC1	48159500	L7806
mIC3	48129000	M5236L

Parts No.	Stock No.	Description
•Diode		
mD1	48159800	CTM-22R
mD2	48159900	CTM-22S
mD3	03117700	10E-2
mD4	03117000	RB152-LFF
mD5	03117700	10E-2
mD6	03117700	10E-2
mD7	03117700	10E-2
mD8	03117700	10E-2
mD9	03117700	10E-2
•Zener Diode		
mDZ1	46114200	05Z13-Y
mDZ2	46114200	05Z13-Y
mDZ3	46115900	05Z24-X
	or 46116000	05Z24-Y
mDZ4	46113900	05Z12-Y
mR1	46623100	10Ω 2W N.I.R. (S-X1200)
	46623500	22Ω 2W N.I.R. (S-X900)
mR5	46624100	68Ω 2W N.I.R. (S-X1200)
	46623500	22Ω 2W N.I.R. (S-X900)
mR10	46623900	47Ω 2W N.I.R.
mR14	46623100	10Ω 2W N.I.R.
mR21	46623500	22Ω 2W N.I.R.
mR25	46623500	22Ω 2W N.I.R.
mR50	46622700	4.7Ω 2W N.I.R.
mC1	48448700	10000μF 90V E.C. (S-X1200)
	48338900	8200μF 80V E.C. (S-X900)
mC2	48448700	10000μF 90V E.C. (S-X1200)
	48338900	8200μF 80V E.C. (S-X900)
•Transistor		
oQ14	46719900	DTC124ES (SX-1200)
oQ15	46719900	DTC124ES (SX-1200)
oQ34	46719800	DTA124ES (SX-1200)

3-2. F-5765 PHONES Jack Board

Parts No.	Stock No.	Description
oZ1	46579600	Jack,

3-3. F-5766 Fuse Board

Parts No.	Stock No.	Description
⚠pF1	48721800	Fuse 5.0A for S-X1200 (XX-V)
⚠	48722200	Fuse 10A for S-X1200 (UL•CSA)
⚠	48721600	Fuse 3.5A for S-X900 (XX-V)
⚠	48722000	Fuse 7.0A for S-X900 (UL•CSA)
⚠	07185100	Fuse 2.5A for S-X900 (EU)
⚠pF2	48721800	Fuse 5.0A for S-X1200 (XX-V)
⚠	48721600	Fuse 3.5A for S-X900 (XX-V)

3-4. F-5767 Lamp Board

Parts No.	Stock No.	Description
nPL1	48867200	8V 0.3A Pilot Lamp
nPL2	48867200	8V 0.3A Pilot Lamp

3-5. F-5768 Speaker Terminal Board

Parts No.	Stock No.	Description
⚠kR100	46622700	4.7Ω 2W N.I.R.
⚠kR101	46622700	4.7Ω 2W N.I.R.
	48569100	8P Terminal, Speaker

3-6. F-5769 EQ Amp. & Input Selecter Board

<Stock No. 01055001 = S-X1200/Stock No. 01053301 = S-X900>

Parts No.	Stock No.	Description
•IC		
iIC1	46078900	M5218L
•Diode		
ID1	03117600	1S2473T77
	or 46086000	1S1588TP-3
•Transistor		
oQ1	46367001	2SA1115
	or 46367201	2SA1048
oQ2	46719800	DTA124ES
oQ3	46719900	DTC124ES
oQ4	46719900	DTC124ES
oQ5	46719900	DTC124ES
oQ6	46719800	DTA124ES
oQ7	46719800	DTA124ES
oQ8	46719800	DTA124ES
oQ9	46719800	DTA124ES
oQ23	46719900	DTC124ES
oQ24	46719800	DTA124ES
oQ25	46719900	DTC124ES
oQ27	46719900	DTC124ES
oQ28	46719900	DTC124ES
oQ29	46719900	DTC124ES
oQ30	46719900	DTC124ES
oQ31	46719800	DTA124ES
oQ32	46719800	DTA124ES
oQ33	46719800	DTA124ES
oQ50	46719900	DTC124ES
•IC		
oIC1	46394800	LC7815H
oIC2	46255000	LC4066BH
oIC3	46255000	LC4066BH
oIC4	48109600	TC9135P
oIC5	46255000	LC4066BH
oIC6	46255000	LC4066BH
•Diode		
oD1	03117600	1S2473T77
	or 46086000	1S1588TP-3
oD2	03117600	1S2473T77
	or 46086000	1S1588TP-3
oD3	03117600	1S2473T77
	or 46086000	1S1588TP-3
oD5	03117600	1S2473T77
	or 46086000	1S1588TP-3
oD6	03117600	1S2473T77
	or 46086000	1S1588TP-3
oD7	03117600	1S2473T77
	or 46086000	1S1588TP-3
oD8	03117600	1S2473T77
	or 46086000	1S1588TP-3
oD9	46222300	DAN401
oD12	03117600	1S2473T77
	or 46086000	1S1588TP-3
oD13	03117600	1S2473T77
	or 46086000	1S1588TP-3
oD20	03117600	1S2473T77
	or 46086000	1S1588TP-3
oD21	03117600	1S2473T77
	or 46086000	1S1588TP-3
oD30	46078000	1SS133
•Zener Diode		
oDZ1	46112700	05Z8.2-Y (S-X1200)
oDZ2	46112700	05Z8.2-Y (S-X1200)
qZ6	48528400	2P Terminal, PHONO•CD
qZ7	48528200	4P Terminal, TAPE 1•2

3-7. F-5794 VOLUME Indicator Board

Parts No.	Stock No.	Description
nLD27	48841100	SEL3110S

3-8. F-5770 Video Signal Selecter Board

<Stock No. 01055101 = S-X1200/Stock No. 01053401 = S-X900>

Parts No.	Stock No.	Description
•Transistor		
oQ20	46202901	2SC1674
oQ21	46202901	2SC1674
oQ22	46202901	2SC1674
oQ26	46202901	2SC1674
•IC		
oIC10	46255000	LC4066BH
qZ10	48850800	2P Terminal, VCR-1 (S-X1200)
qZ11	48850800	2P Terminal, VCR-2 (S-X1200)
	48850900	3P Terminal, VCR 1•2 (S-X900)
qZ23	48850700	1P Terminal, MONITOR

3-9. F-5771 VOLUME Board

<Stock No. 01055201 = S-X1200/Stock No. 01053501 = S-X900>

Parts No.	Stock No.	Description
•Transistor		
jQ200	46581701	2SC1845
•IC		
jIC101	46078900	M5218L
jC200	48102000	10μF 16V E.B.
jVR2	48864600	150kΩ V.R., VOLUME (S-X1200)
	48864500	150kΩ V.R., VOLUME (S-X900)
•Transistor		
oQ12	46719800	DTA124ES (SX-1200)
oQ13	46719800	DTA124ES (SX-1200)
•IC		
oIC9	46421000	μPD4066BC (SX-1200)

3-10. F-5772 VCR Terminal Board

<Stock No. 01055301=S-X1200>

Parts No.	Stock No.	Description
•Transistor		
oQ10	46719800	DTA124ES (SX-1200)
oQ11	46719800	DTA124ES (SX-1200)
•IC		
oIC8	46421000	μPD4066BC (SX-1200)
qZ8	48864700	6P Terminal, VCR-1•VCR-2 IN
qZ9	48866800	2P Terminal, VCR-2 OUT (SX-1200)
qZ12	48528200	4P Terminal, PROCESSOR (SX-1200)

3-11. F-5773 Tone Control Board

<Stock No. 01055401=S-X1200/Stock No. 01053701 =S-X900>

Parts No.	Stock No.	Description
•IC		
jIC100	46078900	M5218L
jVR1	48864200	100kΩ (B) V.R., SOUND ATTACK level (SX-1200)
jVR3	48864400	100kΩ (B) V.R., TREBLE
jVR4	48864400	100kΩ (B) V.R., BASS
jVR5	48864300	150kΩ (B) V.R., LOUDNESS
jVR6	48864100	250kΩ V.R., BALANCE
nLD26	46176900	TLS-123, SOUND ATTACKER (SX-1200)
•Diode		
oD17	46464100	1SS133 (SX-1200)
oD25	46464100	1SS133 (SX-1200)
oS11	46563500	Push SW., SOUND ATTACKER (SX-1200)

3-12. F-5775 Tuning Control Board <Stock No. 01055601 = S-X1200/Stock No. 01053901 = S-X900>

Parts No.	Stock No.	Description
•Transistor		
fQ1	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
fQ2	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
fQ3	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
fQ4	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
fQ5	46719800	DTA124ES
fQ6	46719800	DTA124ES
fQ7	46367101	2SC2603 (SX-1200)
	or 46367301	2SC2458 (SX-1200)
	or 46391901	2SC2785 (SX-1200)
fQ8	46367101	2SC2603 (SX-1200)
	or 46367301	2SC2458 (SX-1200)
	or 46391901	2SC2785 (SX-1200)
fQ9	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
fQ10	46719800	DTA124ES (SX-1200)
•FET		
fFT1	46643501	2SK163-K2
	or 46643502	2SK163-L1
	or 46643601	2SK117-Y
	or 46643602	2SK117-GR
•IC		
fIC1	07225000	TD6104P
fIC2	48128000	TC9157AP
fIC3	46530000	TC4022BP (SX-1200)
fXO1	07237700	Quartz Crystal NR-18
•Diode		
fD1 ~ fD6	46464100	1SS133 (SX-1200)
fD7 ~ fD15	46464100	1SS133 (SX-1200)
fC6	48103500	2.2μF 50V E.B.
fC12	48388400	4700μF 6.3V E.C.
nLD24	48272600	SEL2213C, LOCK
nLD25	48272600	SEL2213C, STEREO
oS12	46563500	Push SW., SPEAKERS-A
oS13	46563500	Push SW., SPEAKERS-B
oS52	46563500	Push SW., CH-CALL
oS53	46563500	Push SW., MANUAL/MONO
oS54	46563500	Push SW., HI-BLEND
oS55	48306900	Push SW., UP
oS56	48306900	Push SW., DOWN
oS57	48306900	Push SW., STO
oS58	48306900	Push SW., M1
oS59	48306900	Push SW., M2
oS60	48306900	Push SW., M3
oS61	48306900	Push SW., M4
oS62	48306900	Push SW., M5
oS63	48306900	Push SW., M6
oS64	48306900	Push SW., M7
oS65	48306900	Push SW., M8
oS66	46563500	Push SW., P-SCAN (SX-1200)
•Transistor		
sQ1 ~ sQ5	46719900	DTC124ES
•IC		
sIC1	48054400	BA6104
sIC3	48054300	DT5C144E
sIC4	46410100	TD6301AP

Parts No.	Stock No.	Description
•Diode		
sD1	46464100	1SS133
sD2	46464100	1SS133
sD3	46464100	1SS133
sFL1	48170300	FL. Display Tube FG78N2
sLD1 ~ sLD5	48841200	SEL3910A, Signal
sLD6	48272600	SEL2213C, Ch-1
sLD7	48272600	SEL2213C, Ch-2
sLD8	48272600	SEL2213C, Ch-3
sLD9	48272600	SEL2213C, Ch-4
sLD10	48272600	SEL2213C, Ch-5
sLD11	48272600	SEL2213C, Ch-6
sLD12	48272600	SEL2213C, Ch-7
sLD13	48272600	SEL2213C, Ch-8
sLD14	48272600	SEL2213C, Ch-9
sLD15	48272600	SEL2213C, Ch-10
sLD16	48272600	SEL2213C, Ch-11
sLD17	48272600	SEL2213C, Ch-12
sLD18	48272600	SEL2213C, Ch-13
sLD19	48272600	SEL2213C, Ch-14
sLD20	48272600	SEL2213C, Ch-15
sLD21	48272600	SEL2213C, Ch-16
sLD22	48272600	SEL2213C, 1 ~ 8
sLD23	48272600	SEL2213C, 9 ~ 16
sLD24	48272600	SEL2213C, LOCK
sLD25	48272600	SEL2213C, STEREO
sLD26	48272600	SEL2213C, AUTO/STEREO
sLD27	48272600	SEL2213C, HI-BLEND
sR14	46344700	1.8kΩX6 1/8W A.R.
sR15	46353000	10kΩX10 1/8W A.R.
sR16	46349300	10kΩX8 1/8W A.R.
sR17	46349300	10kΩX8 1/8W A.R.

3-13. F-5774 Input Selecter SW. Board

<Stock No. 01055501 = S-X1200/Stock No. 01053801 = S-X900>

Parts No.	Stock No.	Description
•LED		
nLD14	48841100	SEL3110S, AM
nLD15	48841100	SEL3110S, FM
nLD16	48841100	SEL3110S, TAPE-2
nLD17	48841100	SEL3110S, TAPE-1
nLD18	48841100	SEL3110S, CD
nLD19	48841100	SEL3110S, PHONO
nLD20	48841100	SEL3110S, VCR-1
nLD21	48841100	SEL3110S, VCR-2
nLD22	46176900	TLS-123, PROCESSOR (SX-1200)
nLD23	46176900	TLS-123, RANGE
•Diode		
oD10	46464100	1SS133
oD11	46464100	1SS133
oD15	46464100	1SS133 (SX-1200)
oD24	46464100	1SS133 (SX-1200)
oS1	48306900	Push SW., PHONO
oS2	48306900	Push SW., CD
oS3	48306900	Push SW., TAPE-1
oS4	48306900	Push SW., TAPE-2
oS5	48306900	Push SW., VCR-1
oS6	48306900	Push SW., VCR-2
oS7	48306900	Push SW., FM
oS8	48306900	Push SW., AM
oS9	46563500	Push SW., PROCESSOR (SX-1200)
oS10	46563500	Push SW., RANGE

3-14. F-5776 Tuner Board <Stock No. 01055701 = S-X1200/Stock No. 01054001 = S-X900 for XX & SS/Stock No. 01054005 = S-X900 for EU>

<F-5776>

Parts No.	Stock No.	Description
dZ1	48865600	FM Frontend Pack (S-X1200)
dZ1	48569000	FM Frontend Pack (S-X900)
•Transistor		
dQ1	46393201	2SC2786 (S-X900)
dQ2	46719900	DTC124ES
dQ3	46719900	DTC124ES
dQ4	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
dQ5	46540801	2SC2878
	or 46604301	2SC3327
dQ6	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
dQ7	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
dQ8	46719800	DTA124ES
dQ9	46367001	2SA1115
	or 46367201	2SA1048
	or 46392001	2SA1175
dQ10	46719900	DTC124ES
dQ11	46367001	2SA1115
	or 46367201	2SA1048
	or 46392001	2SA1175
dQ12	46719900	DTC124ES
dQ13	46719900	DTC124ES
dQ14	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
dQ15	46367001	2SA1115
	or 46367201	2SA1048
	or 46392001	2SA1175
•IC		
dIC2	48347500	LA1235
dIC3	48491000	LA3410A
dXO1	48128400	Ceramic OSC Element KBR-457HS
•Diode		
dD1	46464100	1SS133
dD2	03401700	Varistor MV103
dD3 ~ dD11	46464100	1SS133
dC7	48103200	0.47μF 50V E.B.
dC8	48103600	3.3μF 50V E.B.
dC26	48103800	10μF 50V E.B.
dC37	48103500	2.2μF 50V E.B.
dCF1	46202500	Ceramic Filter SFE10.7MS2(RED) (S-X900 for XX, SS, UL & CSA)
	or 46202501	Ceramic Filter KBF10.7MU-NAG (S-X900 for EU)
dCF2	46202500	Ceramic Filter SFE10.7MS2(RED) (S-X900 for XX, SS, UL & CSA)
	or 46202501	Ceramic Filter KBF10.7MU-NAG (S-X900 for EU)
dLP1	46894900	Low Pass Filter, TF-10
dT2	48347600	FM IF Coil
dT3	48347700	FM IF Coil
dVR1	46634700	47kΩ S.V.R., Mute
dVR2	46634700	47kΩ S.V.R., FM Signal
dVR3	46635100	220kΩ S.V.R., Separation

<F-5776>

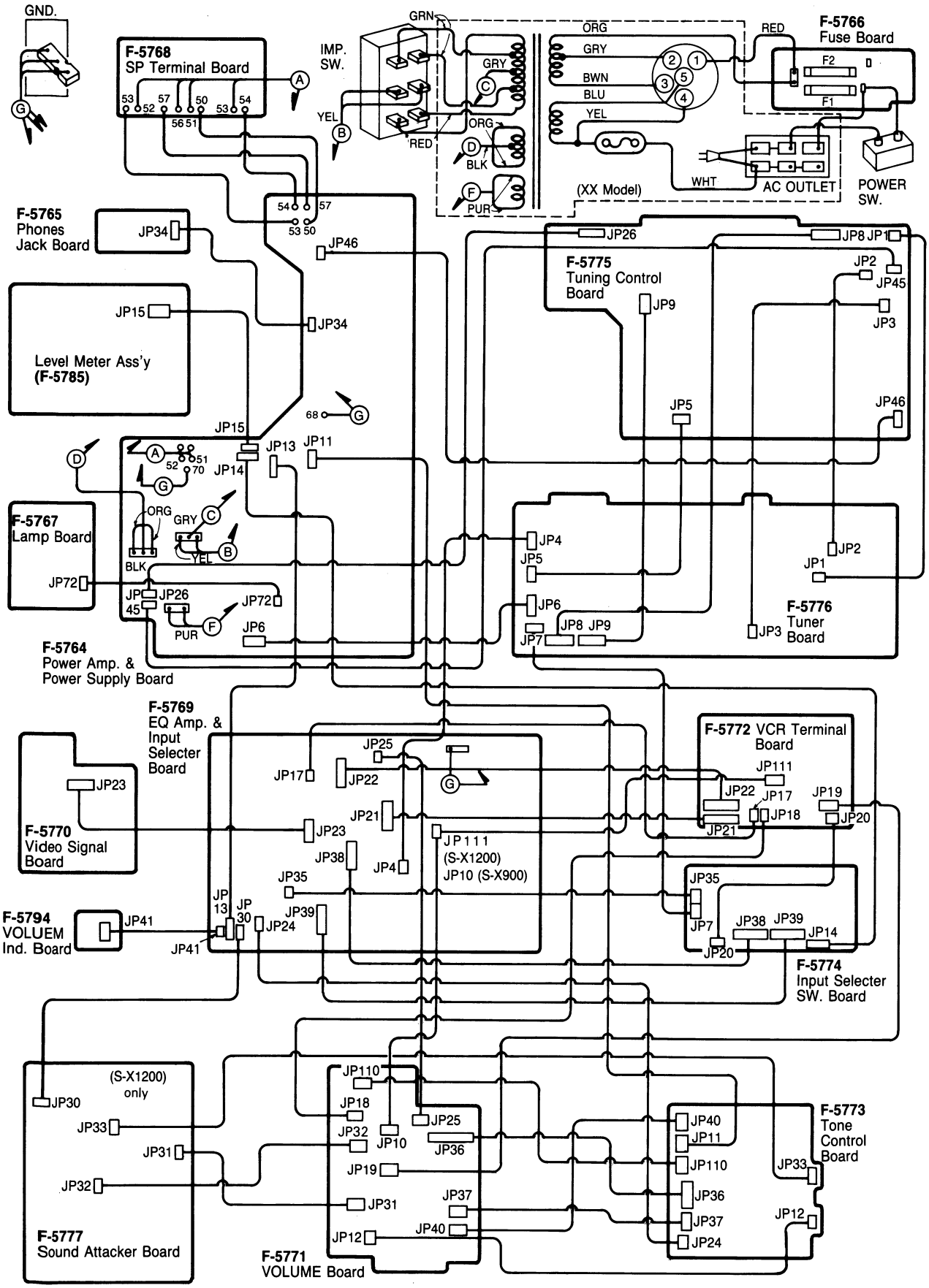
Parts No.	Stock No.	Description
•Transistor		
eQ1	46367101	2SC2603
	or 46367301	2SC2458
	or 46391901	2SC2785
•IC		
eIC1	07237200	LA1245
eD1	46146300	Variable Capacitance Diode, KV1236Z2
•Diode		
eD2	46464100	1SS133
eD3	46464100	1SS133
eD4	03401700	Varistor, MV103
eTC1	46095600	Trimmer Capacitor 20pF
eTC2	46095600	Trimmer Capacitor 20pF
eCF1	48069800	Ceramic Filter CFLZ450A
eCF2	46578100	Ceramic Filter BFU450C10N
eT1	48528900	AM ANT Coil
eT2	46394700	AM OSC Coil
eT3	46369600	AM IF Coil
eVR1	46634700	47kΩ S.V.R., AM Signal
oS51	48529800	Slide SW., AM Channel Step (XX•SS)
qZ14	48848600	Antenna Terminal (XX•SS, UL & CSA)
	48848500	Antenna Terminal (EU)

3-15. F-5777 Sound Attacker Board

<Stock No. 01055801 = S-X1200 only>

Parts No.	Stock No.	Description
•Transistor		
jQ1	46834300	DTC144ES
jQ2	46834300	DTC144ES
•IC		
jIC1 ~ jIC4	46078900	M5218L
jIC5	48053600	μPD4013BC
	or 48072400	BU4013B
jIC6 ~ jIC8	46078900	M5218L
jIC9	48339300	M5222L
jIC10, 11	46078900	M5218L
jIC12	07205300	NJM2901N
jIC13	46078900	M5218L
•Diode		
jD1 ~ jD6	46464100	1SS133
•Zener Diode		
jDZ1	48553600	MTZ8.2BT-77
	or 48553700	MTZ8.2CT-77
jDZ2	48553600	MTZ8.2BT-77
	or 48553700	MTZ8.2CT-77
jC34	48103400	1μF 50V E.B.

4. OVERALL WIRING DIAGRAM



5. ADJUSTMENT

5-1. Bias Adjustment (See Fig. 5-5)

Note: 1) Master Volume ..... Minimum
2) Room Temperature ..... 18°C ~ 28°C (65°F ~ 83°F)
3) For this adjustment, run the unit for more than 10 minutes after the power is switched ON.
4) Before turning ON power switch, set kVR1 on F-5764 to center position.

STEP	SUBJECT	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	Bias Current Adj. L-CH R-CH	Between emitters of power transistors (Across kR18L, kR18R), DC Volt Meter.	kVR1, L-CH kVR1, R-CH	DC 49mV ± 3mV	•This bias value is converted from current value to voltage by ohms law.

5-2. FM Adjustment (See Fig. 5-3 & 5-4)

1. SELECTOR..... FM

1) FM IF

Note: 1. FM MUTING/MODE ..... OFF/MONO

STEP	SUBJECT		FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	IF Coil Adj.		98MHz ANT Input 20dBf (14.8dB), 1kHz (100% MOD.), FM SSG.	ANT terminal 300Ω	Between Point Ⓐ (Pin 13 of dIC2) & Earth (F-5776), DC Volt Meter.	IFT Coil Front-end, (F-5776)	Max. DC Volt	
2.	Discriminator Coil Adj. In case of using Dist meter	1	98MHz ANT Input 65dBf (59.8dB), No. MOD., FM SSG.	ANT terminal 300Ω	Between Point Ⓑ (Pin 7 of dIC2) & Point Ⓒ (Pin 10 of dIC2) (F-5776), DC Volt Meter	dT2 (F-5776)	DC 0V ± 30mV	•Repeat procedures as stated in subject 1 & 2. •Since the IFT Coil has already adjusted, perform only a fine adjustment in this procedure.
		2	98MHz ANT Input 65dBf (59.8dB), 1kHz (100% MOD.), FM SSG.	Same as above	•REC OUT L-CH or R-CH Dist Meter & SCOPE	dT3 (F-5776)	Min. THD	
3.	Signal Level Adj.		98MHz ANT Input 25dBf (19.8dB), 1kHz (100% MOD.), FM SSG.	Same as above	•Signal LED.	dVR2 (F-5776)	Turns ON first LED (First & Second Ind.)	

2) FM STEREO

1. FM MODE ..... AUTO

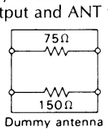
STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	Separation Adj.	98MHz ANT Input 65dBf (59.8dB), FM SSG, Pilot 19kHz (9% MOD.), L MODE 1kHz + Pilot (100% MOD.), STEREO SG.	ANT terminal 300Ω	REC OUT L-CH AC Volt Meter & SCOPE.	——	Read the indication on AC Volt Meter.	Confirm R→L-CH
				REC OUT R-CH AC Volt Meter & SCOPE.	dVR3 (F-5776)	—30dB from the indication above.	
2.	Muting Level Adj.	98MHz ANT Input 25dBf (19.8dB), FM SSG, Pilot 19kHz (9% MOD.), L or R MODE 1kHz + Pilot (100% MOD.), STEREO SSG.	Same as above	Stereo indicator REC OUT L-CH or R-CH. AC Volt Meter & SCOPE.	dVR1 (F-5776)	Stereo indicator turns ON or Outputs Signal comes out	

◆ ADJUSTMENT FOR FM

There are two kind in indication of FM SSG output attenuator
1. Attenuator with marking of 75Ω open ..... open indication type.
2. Attenuator with marking of 75Ω load or close ..... load or close indication type.

FM SG output level in this FM adjustment are described as open indication type.
To feed FM signal, a dummy antenna circuit as Fig. 5-1 must be connected between FM SG output and ANT terminal (300Ω) of the unit.

Fig. 5-1

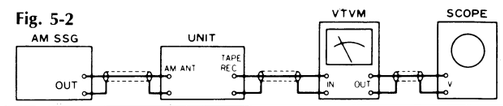


- The following table shows relations among FM SG attenuator indication (dB), available power ratio (dBf) and antenna terminal voltage (dB/μV) in each indication type.

	FM SG Attenuator Indication	Available Power Ratio	Antenna Terminal Voltage
Open indication type	0 dB 66 dB	—0.8 dBf 65.2 dBf	—6 dB/μV 60 dB/μV
Load or close indication type	0 dB 60 dB	5.2 dBf 65.2 dBf	0 dB/μV 60 dB/μV

5-3. AM Adjustment (See Fig. 5-2 & 5-4)

Fig. 5-2



Note: 1. SELECTOR ..... AM
2. Connect AM loop antenna to AM antenna terminal.

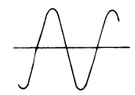
STEP	SUBJECT	FEED SIGNAL FROM	FEED SIGNAL TO	MEASURE OUTPUT	ADJUST	ADJUST FOR	REMARKS
1.	IF Coil Adj.	999kHz (or 1000kHz) ANT Input ± 30dB 400Hz (30% MOD.), AM SSG.	ANT terminal	Between Point Ⓕ (Pin No. 16 of eCI) & Earth	eCF1, eT3 (F-5776)	Max. DC Volt	
2.	531kHz (or 530kHz) Tuning Adj.	No Input.	——	Between Point Ⓒ (eR1, F-5776) & Earth DC Volt Meter.	eT2 (F-5776)	1V ± 0.1V	•Repeat procedures as started in subject 2 & 3.
3.	1602kHz (or 1600kHz) Tuning Adj.	No Input.	——	Same as above.	eTC2 (F-5776)	8V ± 0.1V	
4.	603kHz (or 600kHz) RF Adj.	603kHz (or 600kHz) ANT Input 30dB 400Hz (30% MOD.), AM SSG.	ANT terminal	REC OUT L-CH or R-CH VTVM & Scope.	eT1 (F-5776)	Max. Output	
5.	1404kHz (or 1400kHz) RF Adj.	1400kHz (or 1400kHz) ANT Input 30dB 400Hz (30% MOD.), AM SSG.	Same as above	REC OUT L-CH or R-CH VTVM & Scope.	eTC1 (F-5776)	Max. Output	
6.	Signal Level Adj.	999kHz (or 1000kHz) ANT Input 50dB 400Hz (30% MOD.), AM SSG.	Same as above	Signal LED.	eVR1 (F-5776)	Turns ON First LED (First & Second Ind.)	

Fig. 5-3

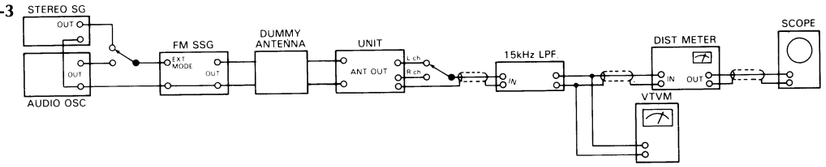


Fig. 5-4 F-5776 Adjustment Points

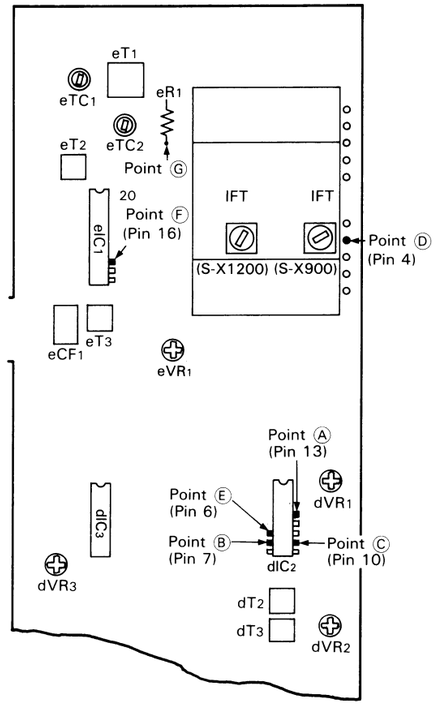
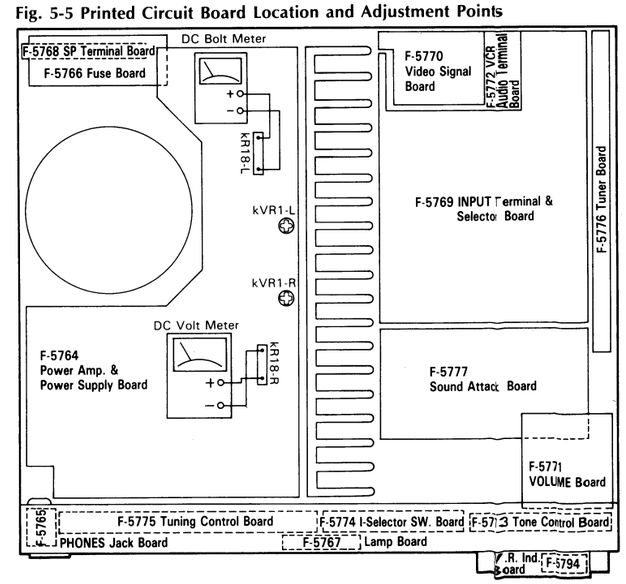


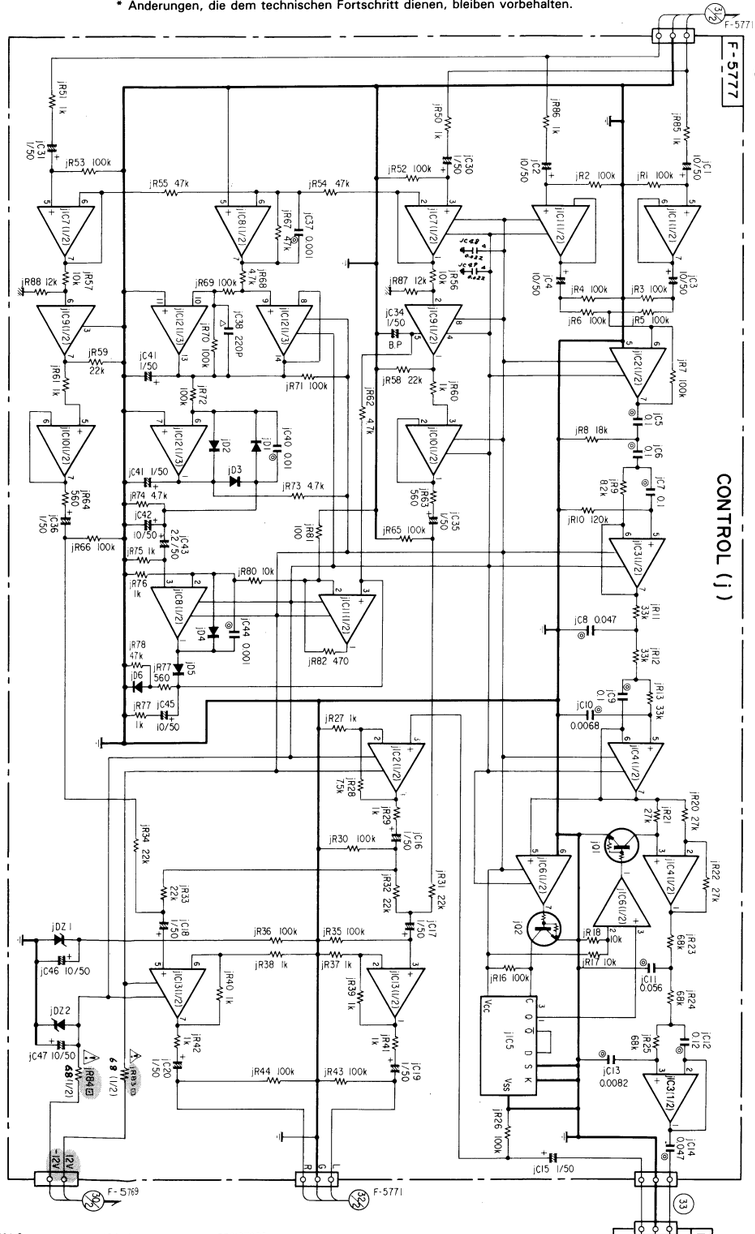
Fig. 5-5 Printed Circuit Board Location and Adjustment Points

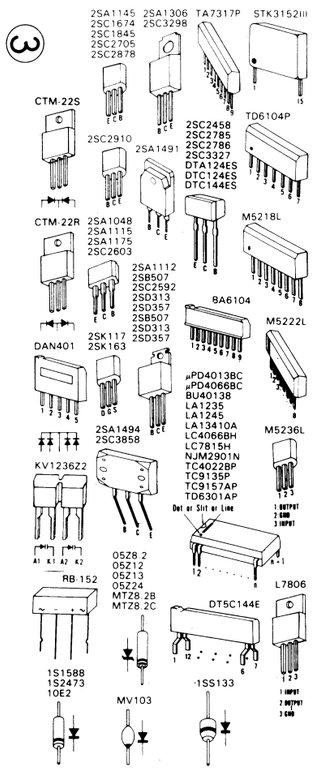


6. SCHEMATIC DIAGRAM & INTERIOR BLOCK DIAGRAM OF ICs

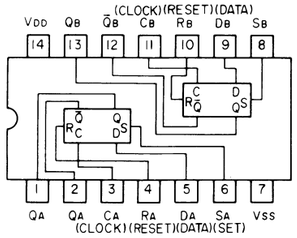
6-1. Sound Attacker Section

* Design and specifications subject to change without notice for improvement.
* La présention et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.





•BU4013B/μPD4013BC (Dual D-type Flip Flop)



Input				Output	
CLOCK	DATA	SET	RESET	Qn+1	$\overline{Q_{n+1}}$
⌒	L	L	L	L	H
⌒	H	L	L	H	L
⌒	X	L	L	Qn	$\overline{Q_n}$
X	X	L	H	L	H
X	X	H	L	H	L
X	X	H	H	L	L

H : High
L : Low
X : H or L
Qn : Output signal before clock pulse
Qn+1 : Output signal after clock pulse

IQ1,2	DTC144ES
IC1~4,6~8,10,11,13	M5218L
IC5	BU4013 μPC4013
IC12	NJM2901
IQ1~6	IS2473D IS188
IDZ1,2	05Z8.2(X,Y)

RESISTORS
Chip Resistors are 1/8 Watts
Are in ohms, 1/4 Watts ±5% Tolerance Unless Otherwise Noted. k: kΩ, M: MΩ

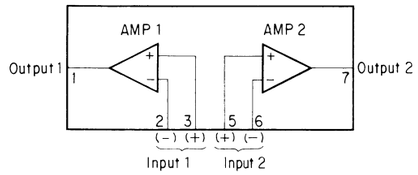
CAPACITORS
J: ±5% G: ±2% F: 1%
Each D.C Voltage shows the nominal value in volts at no input signal
Electrolytic Capacitor : Capacitance (μF) / Volt (V)

SYMBOL
△ Ceramic Capacitor
◎ Film Capacitor
⊡ Non-Inflammable Resistor
⊠ Polystyrene
Ⓒ Chip Component (Cylindrical type)
⊠ Chip Component

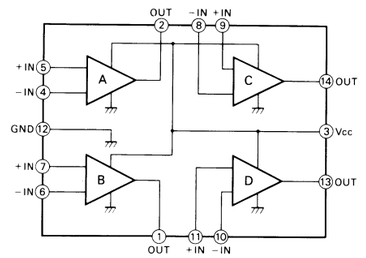
⚠ is Safety Part.
Use only replacement parts recommended by the manufacturer.

•M5222L ... refer to page 17.

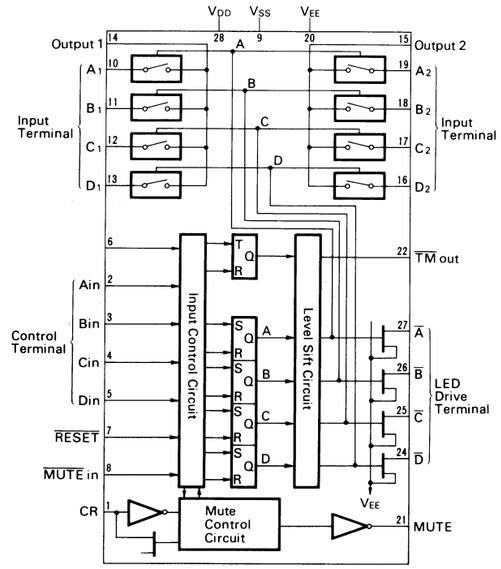
•M5218L (Dual Operation Amp.)



•NJM2901N (Quad Comparator)



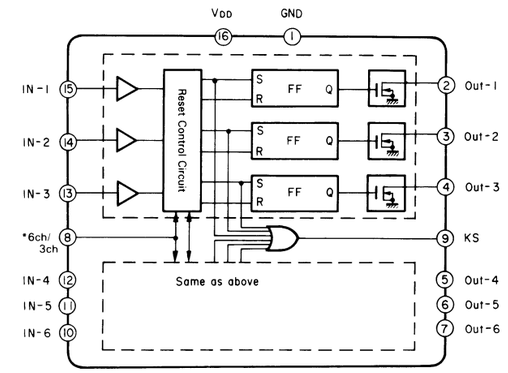
•LC7815H/LC7816 (Analog Function SW.)



Condition of control input terminals Port (Pin No.)				Connected input terminal to output 1 and 2 terminals		Connected terminal to LED indicator
Ain (2)	Bin (3)	Cin (4)	Din (5)	PORT (Pin No.)	PORT (Pin No.)	PORT (Pin No.)
H	*	*	*	A1 (10)	A2 (19)	A (27)
L	H	*	*	B1 (11)	B2 (18)	B (28)
L	L	H	*	C1 (12)	C2 (17)	C (25)
L	L	L	H	D1 (13)	D2 (16)	D (24)

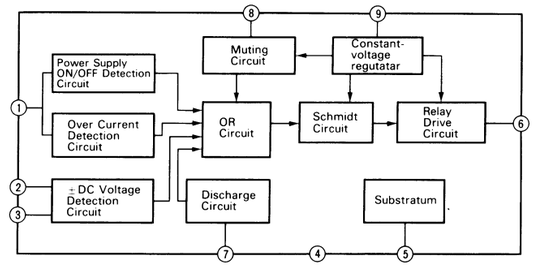
H: H level L: L level *: Don't care

•TC9135P (Function Switch IC)

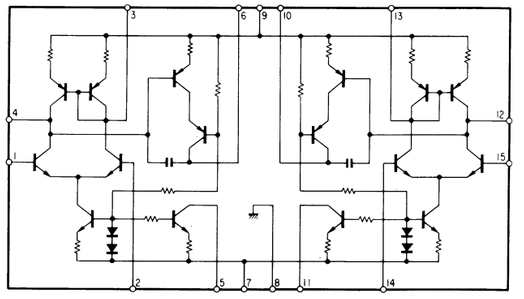


• Terminal for inputing mutual reset control.
When this terminal is H level voltage, all Flip-Flop Circuits are mutual reset type.
When this terminal is L level voltage, each Flip-Flop circuits are separation mutual reset erouos of IN-1 ~ IN-3 and IN4 ~ IN-6.

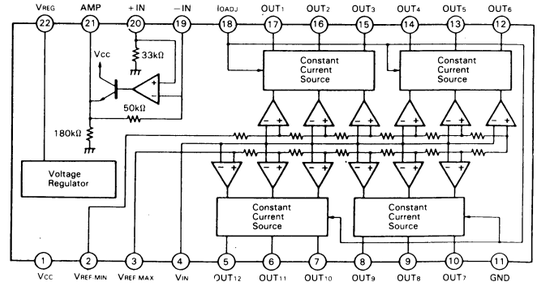
•TA7317P (Protector)



•STK3152-3 (Differential Amp. IC)



•IR2E33 (LED Driver)


VREG AMP +IN −IN IOADJ OUT1 OUT2 OUT3 OUT4 OUT5 OUT6
Vcc
33kΩ
50kΩ
180kΩ
Voltage Regulator
Constant Current Source
VCC VREF-MIN VREF MAX VIN OUT12 OUT11 OUT10 OUT9 OUT8 OUT7 GND

A	B	C	D	E	F	G	H

6-2. S-X1200 Amplifier Section

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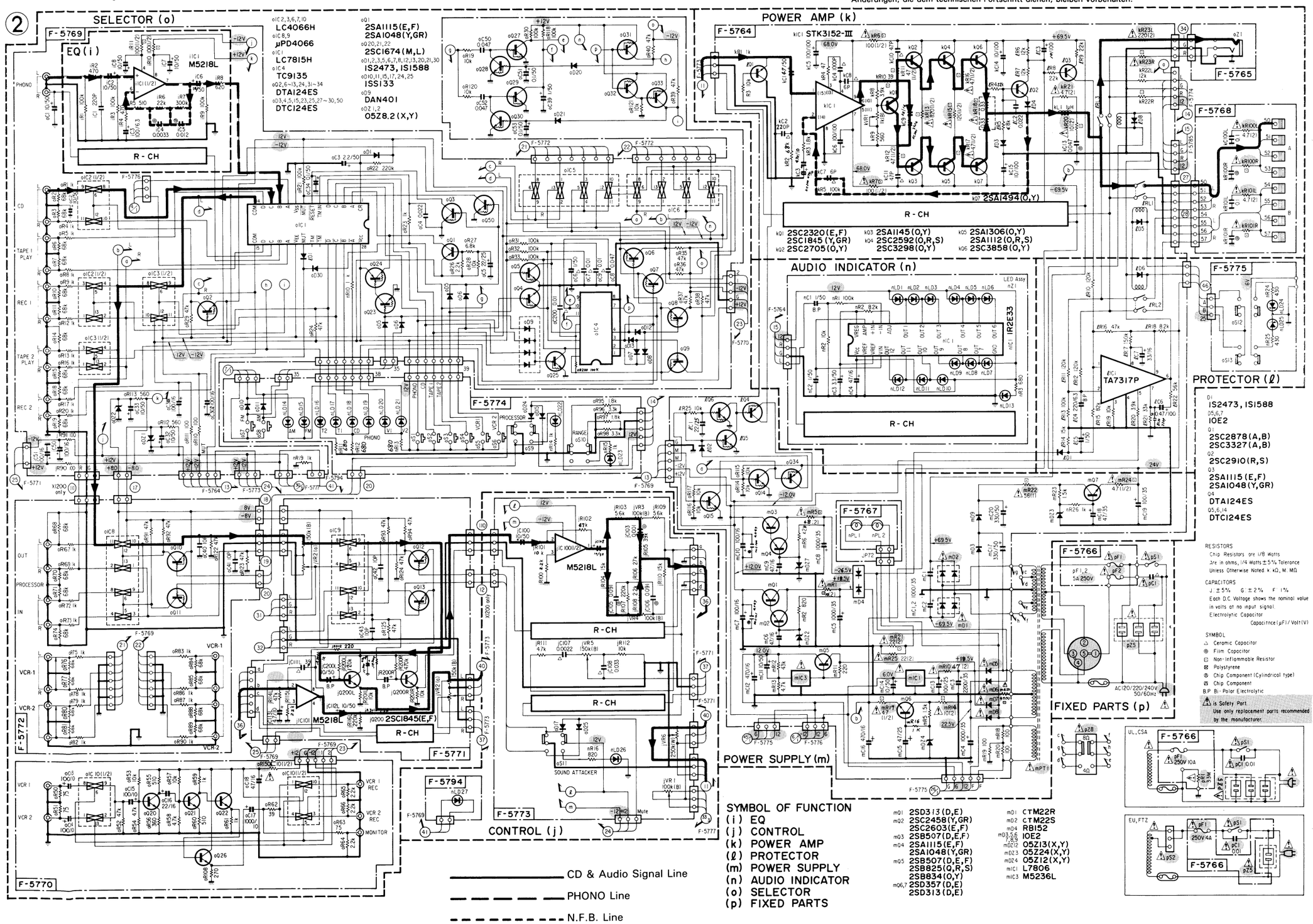

oIC2,3,6,7,10 LC4066H
oIC8,9 µPD4066
oIC1 LC7815H
oIC4 TC9135
oQ2,6~13,24,31~34 DTAI24ES
oQ3,4,5,15,23,25,27~30,50 DTCI24ES

oQ1 2SAI115(E,F) 2SAI048(Y,GR)
oQ20,21,22 2SCI674(M,L)
oD1,2,3,5,6,7,8,12,13,20,21,30 IS2473, ISI588
oD10,11,15,17,24,25 ISS133
oD9 DAN401
oDZ1,2 05Z8.2(X,Y)

kQ1 2SC2320(E,F) 2SC1845(Y,GR) 2SC2705(O,Y)
kQ3 2SAI145(O,Y) 2SC2592(O,R,S) 2SC3298(O,Y)
kQ5 2SAI306(O,Y) 2SAI112(O,R,S) 2SC3858(O,Y)
kQ2 2SC2705(O,Y)
kQ4 2SC2592(O,R,S) 2SC3298(O,Y)
kQ6 2SC3858(O,Y)
kQ7 2SAI494(O,Y)

D: IS2473, ISI588
D5,6,7 IOE2
Q1 2SC2878(A,B) 2SC3327(A,B)
Q2 2SC2910(R,S)
Q3 2SAI115(E,F) 2SAI048(Y,GR)
Q4 DTAI24ES
Q5,6,14 DTCI24ES

RESISTORS
Chip Resistors are 1/8 Watts
Are in ohms, 1/4 Watts ±5% Tolerance
Unless Otherwise Noted k-kΩ, M-MΩ

CAPACITORS
J: ±5% G: ±2% F: 1%
Each D.C. Voltage shows the nominal value in volts at no input signal.
Electrolytic Capacitor
Capacitance (µF) / Volt (V)

SYMBOL
△ Ceramic Capacitor
◉ Film Capacitor
⊡ Non-Inflammable Resistor
⊠ Polystyrene
Ⓒ Chip Component (Cylindrical type)
⊠ Chip Component
B.P Bi-Polar Electrolytic

⚠ is Safety Part.
Use only replacement parts recommended by the manufacturer.

SYMBOL OF FUNCTION
(i) EQ
(j) CONTROL
(k) POWER AMP
(ℓ) PROTECTOR
(m) POWER SUPPLY
(n) AUDIO INDICATOR
(o) SELECTOR
(p) FIXED PARTS

mQ1 2SD313(D,E)
mQ2 2SC2458(Y,GR)
2SC2603(E,F)
mQ3 2SB507(D,E,F)
mQ4 2SAI115(E,F)
2SAI048(Y,GR)
mQ5 2SB507(D,E,F)
2SB825(Q,R,S)
2SB834(O,Y)
mQ6,7 2SD357(D,E)
2SD313(D,E)

mD1 CTM22R
mD2 CTM22S
mD4 RBI52
mD5,6 IOE2
mDZ1,2 05ZI3(X,Y)
mDZ3 05Z24(X,Y)
mDZ4 05ZI2(X,Y)
mIC1 L7806
mIC3 M5236L

CD & Audio Signal Line
PHONO Line
N.F.B. Line

2SA1145 2SA1306 TA7317P
2SC1674 2SC3298
2SC1845
2SC2705
2SC2878
2SC2910 2SA1491 STK3152III
2SA1048 2SA1115 2SA1175 2SC2603 TD6104P
2SA1112 2SB507 2SC2592 2SD313 2SD357 2SB507 2SD313 2SD357 M5218L
2SK117 2SK163
2SA1494 2SC3858 M5222L
M5236L L7806
2SC2458 2SC2786 2SC2786 2SC3327 DTA124ES DTC124ES
µPD4013BC µPD4066BC BU4013B LA1235 LA1245 LA1310A LC4066BH LC7815H TC4022BP TC9135P TC9157AP TD6301AP
CTM-22S DT5C144E
CTM-22R 1S1588 1S2473 10E2 9A6104
MV103 1SS133 RB-152
DAN401 KV1236Z2
05Z8.2 05Z12 05Z13 05Z24 MTZ8.2B MTZ8.2C

A	B	C	D	E	F	G	H

6-3. S-X900 Amplifier Section

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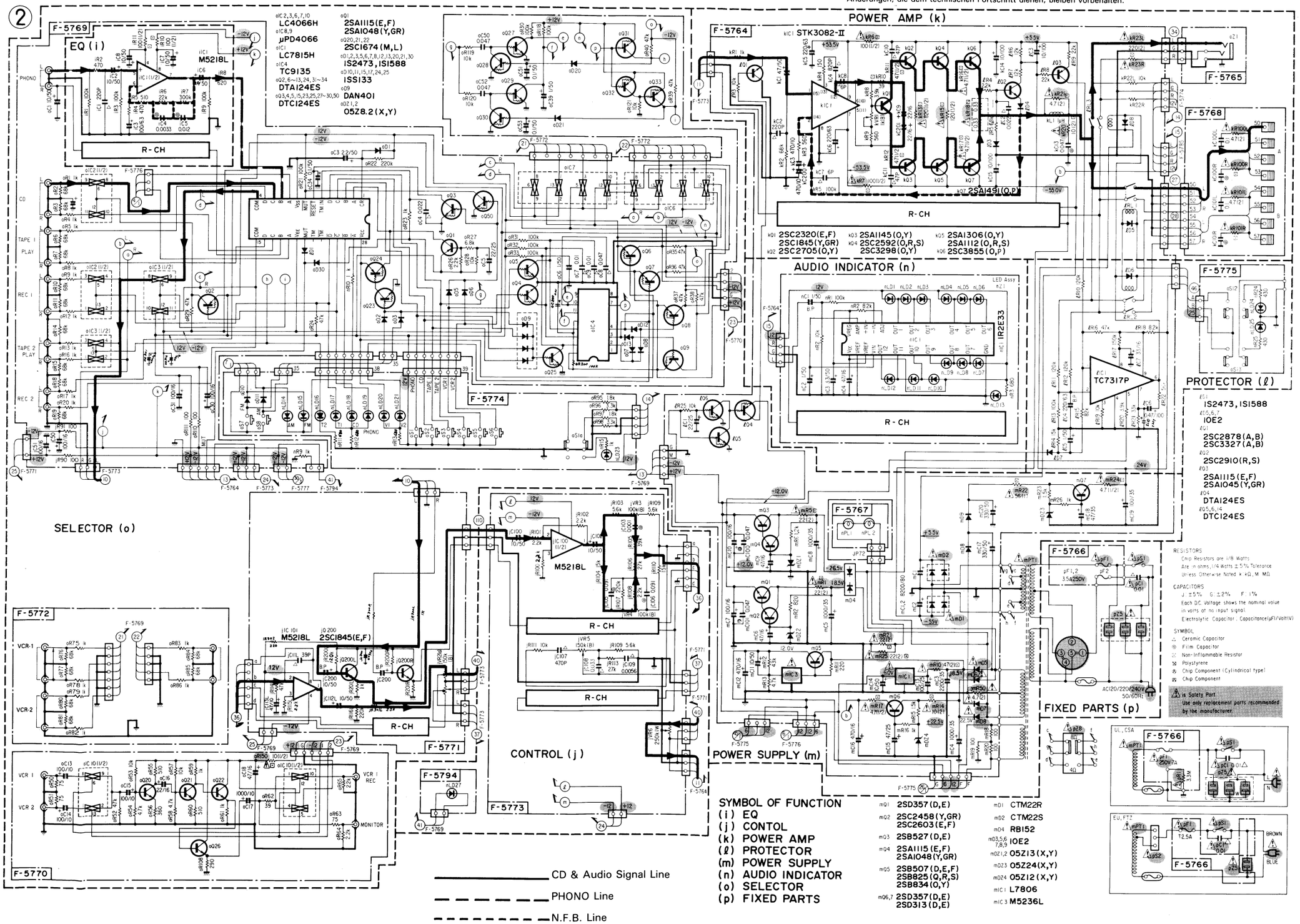

oIC2,3,6,7,10 LC4066H
oIC8,9 µPD4066
oIC1 LC7815H
oIC4 TC9135
oQ2,6~13,24,31~34 DTA124ES
oQ3,4,5,15,23,25,27~30,50 DTC124ES
oQ1 2SAIII5(E,F) 2SAI048(Y,GR)
oQ20,21,22 2SCI674(M,L)
oD1,2,3,5,6,7,8,12,13,20,21,30 iS2473,ISI588
oD 10,11,15,17,24,25 iSS133
oD9 DAN401
oDZ1,2 05Z8.2(X,Y)

kQ1 2SC2320(E,F) 2SCI845(Y,GR) kQ2 2SC2705(O,Y)
kQ3 2SAII45(O,Y) kQ4 2SC2592(O,R,S) 2SC3298(O,Y)
kQ5 2SAI306(O,Y) 2SAII12(O,R,S) kQ6 2SC3855(O,P)
kQ7 2SAJ49(O,P)

mQ1 2SD357(D,E)
mQ2 2SC2458(Y,GR) 2SC2603(E,F)
mQ3 2SB527(D,E)
mQ4 2SAIII5(E,F) 2SAI048(Y,GR)
mQ5 2SB507(D,E,F) 2SB825(Q,R,S) 2SB834(O,Y)
mQ6,7 2SD357(D,E) 2SD313(D,E)
mD1 CTM22R
mD2 CTM22S
mD4 RBI52
mD3,5,6 7,8,9 10E2
mDZ1,2 05Z13(X,Y)
mDZ3 05Z24(X,Y)
mDZ4 05Z12(X,Y)
mIC1 L7806
mIC3 M5236L

SYMBOL OF FUNCTION
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(j) CONTOL
(k) POWER AMP
(ℓ) PROTECTOR
(m) POWER SUPPLY
(n) AUDIO INDICATOR
(o) SELECTOR
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CD & Audio Signal Line
PHONO Line
N.F.B. Line

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Film Capacitor
Non-Inflammable Resistor
Polystyrene
Chip Component (Cylindrical type)
Chip Component

⚠ is Safety Part.
Use only replacement parts recommended by the manufacturer.

2SA1145 2SC1674 2SC1845 2SC2705 2SC2878 — 2SA1306 2SC3298 — TA7317P
2SC2910 — 2SA1491 — STK3152III
2SA1048 2SA1115 2SA1175 2SC2603 — TD6104P
2SA1112 2SB507 2SC2592 2SD313 2SD357 — 2SB507 2SD313 2SD357
2SK117 2SK163 — M5218L
2SA1494 2SC3858 — M5236L — M5222L
2SC2458 2SC2785 2SC2786 2SC3327 DTA124ES DTC124ES DTC144ES — µPD40138C µPD40668C BU40138 LA1235 LA1245 LA1341OA LC4066BH LC7815H NJM2901N TC4022BP TC9135P TC9157AP TD6301AP — L7806
CTM-22S — DT5C144E
CTM-22R — 1S1588 1S2473 10E2 — BA6104
MV103 — 1SS133 — RB-152
DAN401 — 05Z8.2 05Z12 05Z13 05Z24 MTZ8.2B MTZ8.2C — KV1236Z2

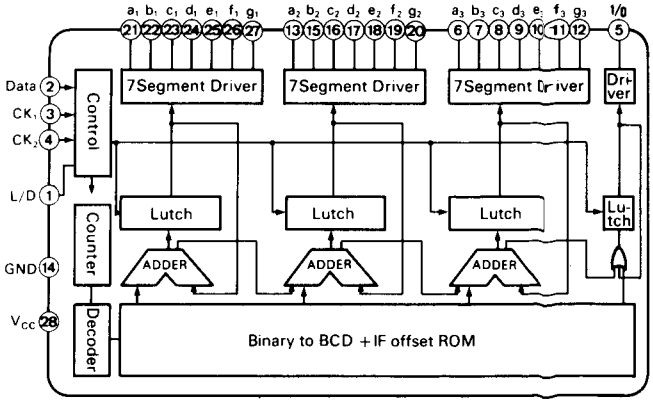
1 2 3 4 5

•Terminal Function of LSI-TC9157AP (PLL & Control)

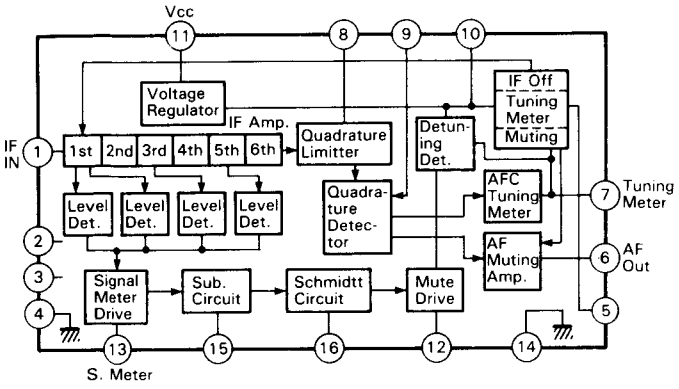
Pin No.	Pin Name	Functions
2,3	XT $\overline{XT}$	Terminals to connect a quartz oscillator for generating a reference frequency.
4 5 6	FM MW LW	Terminals to input a signal for switching FM/MW/LW band.
7 8	MANUAL AUTO	Terminal to input a signal for switching the manual operation to automatic search operation or vice versa in the UP/DOWN tuning mode. "H": Automatic, "L": Manual
9 10	UP DOWN	Terminals to input a signal from the tuning key. *In manual operation: When the key is kept depressed for 0.3 sec or more in one-step/one-push step feeding, the operation changes to fast forwarding; when the key is released, the operation stops at the next stop. In this case, even if there is a station on the way, the station is neglected. *In automatic search operation: When the key is depressed once, the automatic search operation starts and stops automatically after having selected the desired station.
11	STO	Terminal to input a signal for storing data in the preset memory unit. Input/output terminal in which a LED driver is provided. *When depressing the STO key, the STO lamp comes on. Next, when any desired memory No. key is depressed, the data on receiving frequency is written into the memory unit and the STO lamp goes off. *When the STO key is depressed and the memory No. key is not depressed, the frequency data is released automatically.
12 ~ 17	M1 ~ M6	Terminals to input a signal for designating memory address. Input/output terminals in which a LED driver is provided. *Terminals M1 to M6 designate the addresses of FM memory unit in FM receiving and the addresses of AM memory unit in AM receiving. *When depressing the STO key and any desired station key of M1 to M6, the data is written into the memory unit. *When depressing any desired station key of M1 to M6, the data is read out.
22 23	OSC 2 OSC 1	Terminal to connect a condenser and resistor for the oscillator for determinating the speed of AM automatic search operation. Terminal to connect a condenser and resistor for the oscillator for determinating the speed of FM automatic search operation.
24 25 26 27	0/5 CK2 CK1 DATA	Terminals to output the data for displaying the received frequency digitally and a timing signal. The data fed to the driver TD6301P for displaying a static frequency and the timing signal are outputted once only when the frequency is updated in such case as when the power supply is tuned on, the UP/DOWN key is depressed, the automatic scanning operation is made, the data are read out of the memory unit, or FM/AM is switched. In the ordinary receiving state, this terminal is fixed to a "L" level. *0/5: For displaying 50 kHz during FM receiving in Europe. *Data: Binary coded frequency data and receiving band. *CK-1, CK-2: Initialize and transfer clock signals.
28	MUTE	Terminal to output the muting signal. The terminal is kept in "L" level in ordinary state, and in "H" level in muting.

Pin No.	Pin Name	Functions
29 30	E2 E1	Terminals to input a signal for selecting destinations of Japan, USA, and Europe. *Inputs of terminals E1 and E2 are read and latched in INH=L state and in FM/AM switching. E1 E2 Mode 0 0 Japan 1 0 Europe 0 1 USA (MW 9kHz) 1 1 USA (MW 10kHz)
31	STOP 3	When a IF450 kHz signal is applied to this terminal during automatic search operation, the scanning operation stops.
32	STOP 2	Terminal to input a signal for performing the automatic search stop. When a "H" level signal is applied to STOP 1 and this terminal during automatic search operation, the scanning operation stops.
33	STOP 1	Terminal to input a signal for slowing the speed of scanning operation. When a "H" level signal is applied to this terminal during automatic search operation, the speed of scanning operation halves.
34 35	Do-2 Do-1	Terminals to output a signal from a phase comparator. These terminals can be used for FM and AM, separately, since the same signal is outputted from the terminals Do-1 and Do-2 at the same time.
36	TEST	Terminal to input a signal of test mode. Test mode in "H" level.
37	FMIN	Terminal to input a signal from the FM programmable counter. An amplifier is provided in the input.
38	PSC	Terminal to output a signal for controlling the Prescaler IC of TD6104P.
39	AMIN	Terminal to input a signal from the AM programmable counter. An amplifier is provided in the input.
40	INH	Terminal to input a signal of inhibit. Ordinary operation in "H" level; inhibit operation in "L" level.
41	INT	Terminal to input an initialize signal. This terminal changes to H level in the ordinary operation and to L level in the initialize operation.
42 1	VDD VND	Power supply terminals. 5V±0.5V.

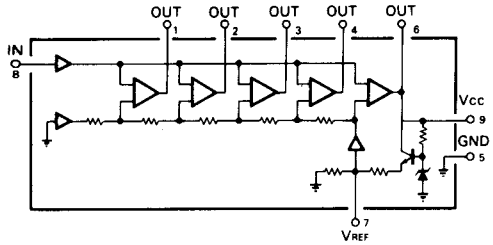
•TD6301P (7-Segment Decoder)



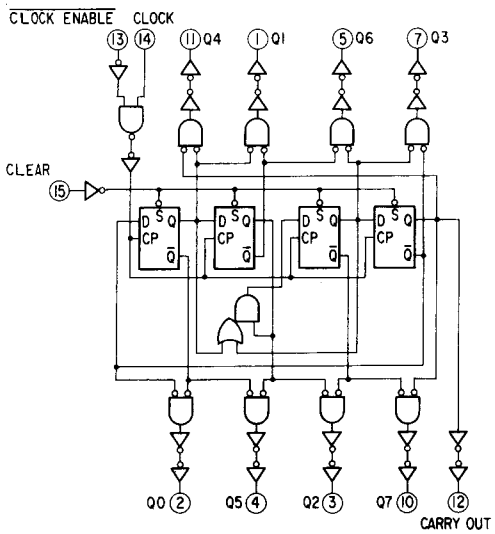
•LA1235 (IF & Quadrature Detector)

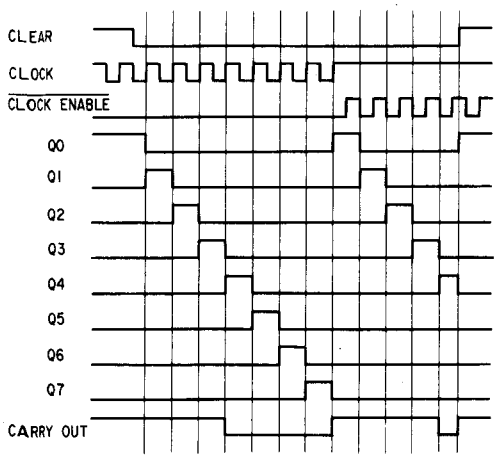


•BA6104 (LED Drive)

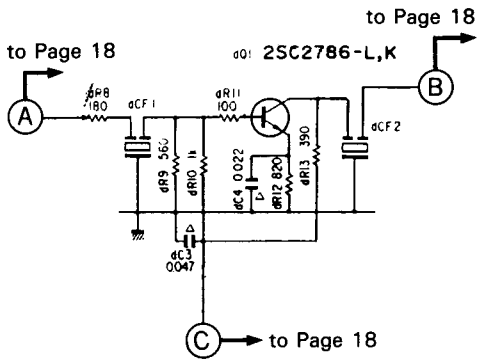


•TC4022BP (8 Count Divider)

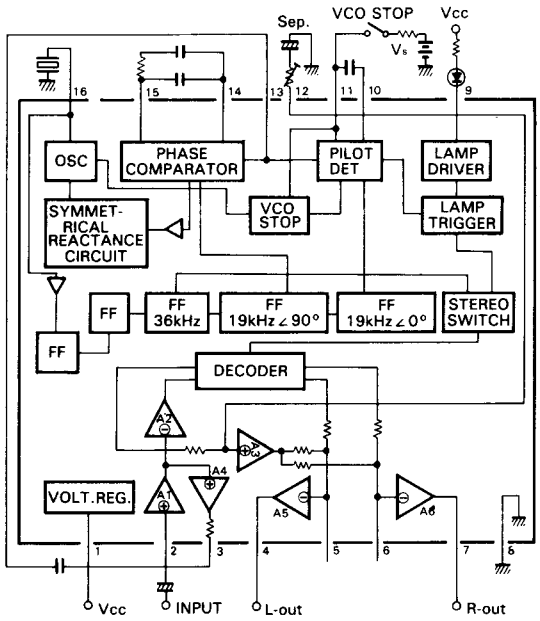




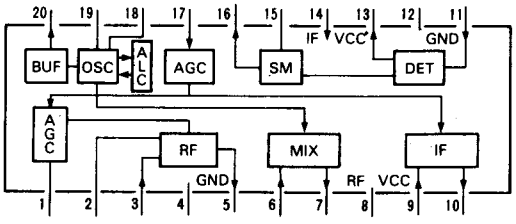
•FM IF Amp. of S-X900



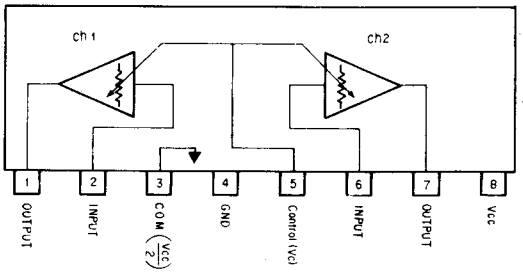
•LA3410 (MPX)



•LA1245 (AM Tuner)



•M5222L (Dual Voltage Control Amp.)



6-4. Tuner Section

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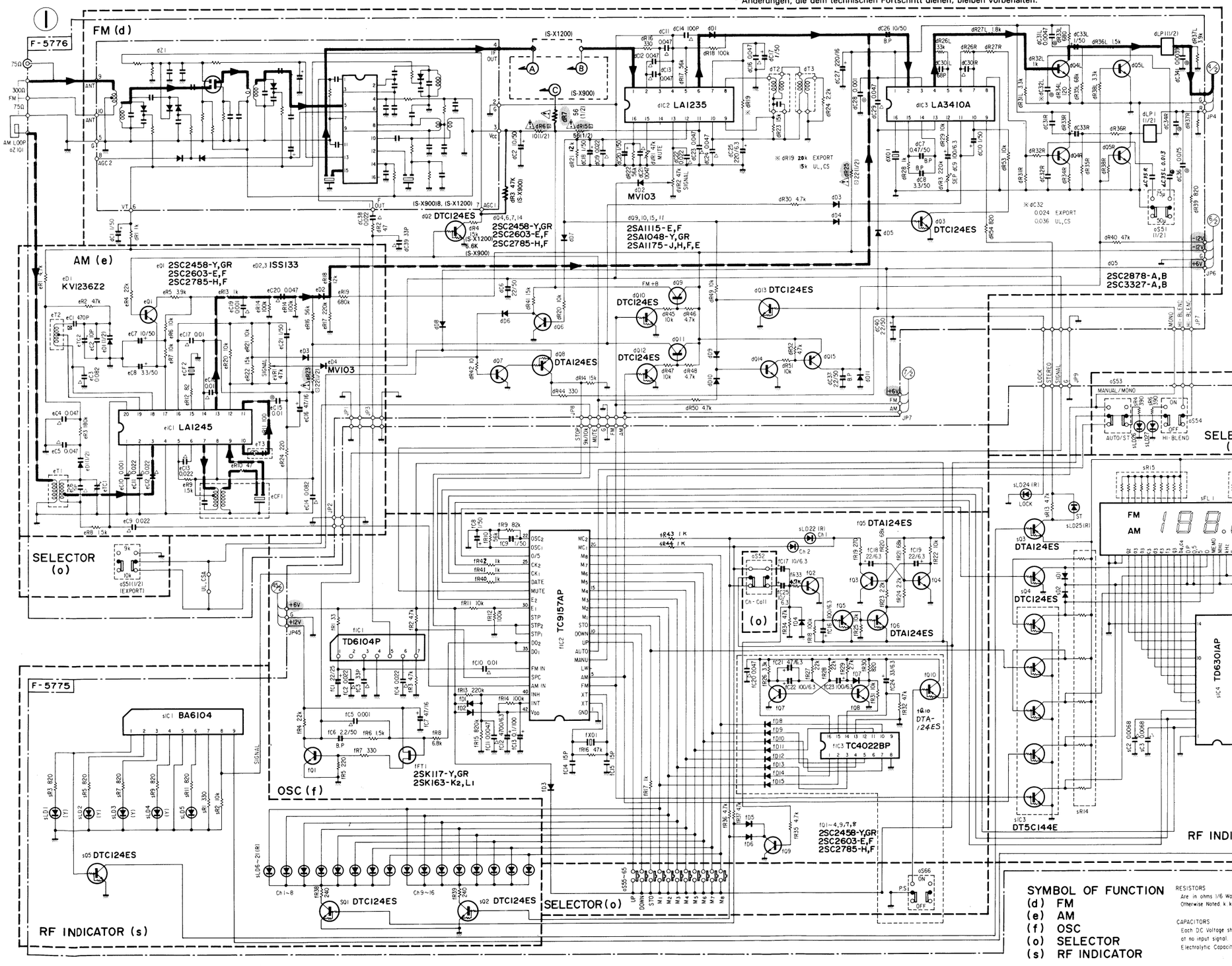
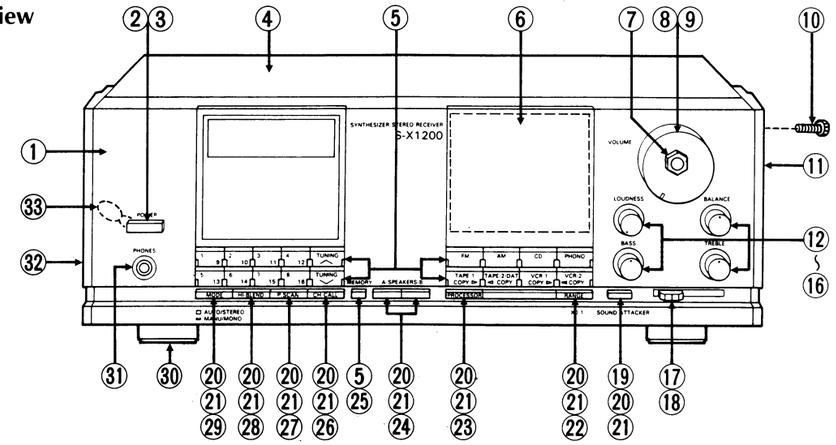


7. OTHER PARTS

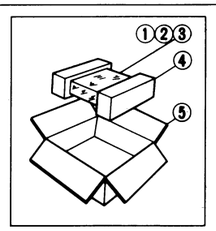
7-1. Front View



Parts No.	Stock No.	Description
1	27414610	Front Panel Ass'y (S-X1200)
	27414510	Front Panel Ass'y (S-X900)
2	27428500	Knob, POWER
⚠ 3	46612900	Push SW., POWER
4	27408100	Bonnet
5	48306900	Tact SW., Pre set station•MEMORY•Input selecter•TUNING
6	48865200	Level Meter Ass'y
6-1	48841400	LED SEL3213C, $-\infty \sim +3$
7	48913200	Nut, VOLUME
8	27406100	Knob, VOLUME
9	48864600	150kΩ V.R., VOLUME (S-X1200)
	48864500	150kΩ V.R., VOLUME (S-X900)
10	48836500	Spesial Screw, M5x14
11	27408600	Right Side Panel
12	27406200	Knob, TONE•BALANCE•LOUDNESS
13	48864300	150kΩ V.R., LOUDNESS (S-X1200)
14	48864100	250kΩ V.R., BALANCE
15	48864400	100kΩ V.R., BASS•TREBLE
16	27452100	Spacer A, TONE•BALANCE•LOUDNESS
17	27406300	Knob, Sounder Attacker Level (S-X1200)
18	48864200	100kΩ V.R., Sound Attacker Level (S-X1200)
19	27405700	Knob, Sound Attacker (S-X1200)
20	46563500	Push SW., Sound Attacker (S-X1200)•RANGE•PROCESSOR (S-X1200)•SPEAKERS•CH CALL•P SCAN•Hi-BLEND•MODE
21	27492300	Spacer-B, Sound Attacker (S-X1200)•RANGE•PROCESSOR (S-X1200)•SPEAKERS•CH CALL•P SCAN•Hi-BLEND•MODE
22	27405600	Knob, RAGE
23	27405500	Knob, PROCESSOR (S-X1200)
24	27403700	Knob, SPEAKERS
25	27403800	Knob, MEMORY
26	27403600	Knob, CH CALL
27	27403500	Knob, P SCAN
28	27403400	Knob, Hi-BLEND
29	27403300	Knob, MODE
30	27273500	Leg
31	46579600	Jack, PHONES
32	27408500	Left Side Panel
⚠ 33	46425800	0.01μF 400V C.C.
⚠	or 46943200	0.01μF 400V C.C.

8. PACKING LIST

Parts No.	Stock No.	Description
1	47858400	Vinyl Bag
2	———	Corrugated Board
3	———	Polyethylene Sheet
4	27481600	Styrofoam Packing
5	27497100	Carton Case (S-X900)
	27497200	Carton Case (S-X1200)

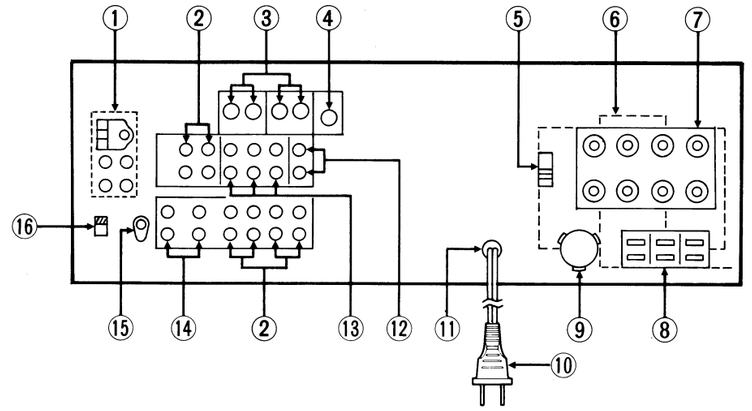


9. ACCESSORY LIST

Stock No.	Description
46051700	FM Antenna
46186100	AM Loop Antenna
07563000	Antenna Holder
48489800	Matching Transformer for S-X900 (EU)
49029400	S-X900 Operating Instruction (*E•F•S)
49029500	S-X900 Operating Instruction (*G•I•Sw)
49029300	S-X1200 Operating Instruction

***Note**
E•F•S: **E**nglish•**F**rench and **S**panish Version
G•I•Sw: **G**erman•**I**talian and **Sw**edish Version

7-2. Rear View



Parts No.	Stock No.	Description
1	48848600	Anntena Terminal
2	48528200	4P Terminal, PROCESSER (S-X1200)•TAPE-1•2
3	48850800	2P Terminal, VCR 1•VCR 2 (S-X1200)
	48850900	3P Terminal, VCR (S-X900)
4	48850700	1P Terminal, MONITOR OUT
5	46739400	Slide SW., SPEAKER IMPEDANCE SELECTOR (XX•EU•SS)
	46736600	Slide SW., SPEAKER IMPEDANCE SELECTOR (UL•CSA)
⚠ 6	15030109	Power Transformer for S-X1200 (XX)
⚠	15030102	Power Transformer for S-X1200 (UL•CSA)
⚠	15030009	Power Transformer for S-X900 (XX•SS)
⚠	15030002	Power Transformer for S-X900 (UL•CSA)
⚠	15030005	Power Transformer for S-X900 (EU)
7	48569100	8P Terminal, SPEAKERS
⚠ 8	46730400	AC OUTLET (XX•SS)
⚠	48184700	AC OUTLET-polarized (XX•UL•CAS)
⚠	46161000	AC OUTLET (EU)
⚠ 9	48175200	Plag-A (XX•SS)
⚠	07204700	Slide SW., (EU)
⚠ 10	38004900	Power Supply Cord (XX)
⚠	48188100	Power Supply Cord-poralized (XX•UL•CSA)
⚠	38004500	Power Supply Cord (EU)
⚠	48837700	Power Supply Cord (SS)
11	39104900	Strain Relief (XX•UL•CSA)
	48913500	Strain Relief (EU•SS)
12	48866800	2P Terminal, VCR-2 OUT (S-X1200)
13	48864700	6P Terminal, VCR-1 IN/OUT•VCR-2 IN
14	48528400	2P Terminal, PHONO•CD
15	48587600	Ground Terminal
16	48529800	Slide SW., Channel Step

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